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ABSTRACT

This monograph is designed assist to teacher preparation institutions that want to use standards of the National Board for Professional Teaching Standards (NBPTS) to help teachers prepare for their National Board Certification process and simultaneously improve their advanced programs for teachers. Part 1, "Rationale for Using NBPTS Standards as a Framework to Redesign Master's Degree Programs," synthesizes the literature in which institutions of higher education can ground their standards-based program development. Part 2, "Common Questions about Using NBPTS Standards as a Framework for Redesigning Master's Degree Programs," lists five common questions repeatedly asked by faculty about using NBPTS standards as a framework (e.g., How does an institutions of higher education begin this process? and What strategies can be used to involve Education and Arts and Sciences faculty in the redesign process?). It draws upon the literature and the practical experience of faculty who are deeply immersed in the redesign of their degree programs and provides insights into lessons learned. Part 3, "Resources," lists references and other resources for faculty to use as they engage in the redesign process. (Contains 61 references.) (SM)

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National Board for PROFESSIONAL TEACHING STANDARDS™

February 2003

USING NATIONAL BOARD STANDARDS TO REDESIGN MASTER'S DEGREES FOR TEACHERS:

A GUIDE FOR INSTITUTIONS OF HIGHER EDUCATION

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Visiting Scholar
for Professional Development
and Higher Education Initiatives

Foreword by
Boyce C. Williams
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Foreword

By Boyce C. Williams
Vice President, Institutional Relations
National Council for Accreditation of Teacher Education (NCATE)

New emphasis on student and teacher performance is profoundly influencing the ways that teachers are selected, prepared, licensed, and recognized. Policymakers now expect teachers and teacher candidates to show evidence of knowledge and skills and the ability to apply them to teach effectively.

The National Board for Professional Teaching Standards has accomplished groundbreaking work in the development of standards for effective teaching in specific subject areas and assessments geared to measure teacher performance against the standards. The National Board's Standards contain a vision of accomplished teaching that can become a framework for the redesign of advanced teacher development programs in universities.

Since 1998, NCATE has been working in collaboration with the National Board to help institutions modify advanced programs so that they are aligned with NBPTS propositions for accomplished practice. Unlike many current master's programs that focus on process, the revised master's programs will be geared specifically to improving the art of teaching, which, in turn, will aid student learning.

There is currently no one best way for higher education institutions to align their advanced master's degree programs with NBPTS Standards. Nor are there comprehensive models from which to learn what works best. As more institutions develop their own models and share their successes and experiences, many institutions will be able to draw from an expanding knowledge base.

This monograph, Using National Board Standards to Redesign Master's Degrees for Teachers: A Guide for Institutions of Higher Education, provides practical help to teacher preparation institutions that want to use these standards to help teachers prepare for the National Board Certification process and simultaneously improve their advanced programs for teachers. The publication poses five questions relating to the use of the standards in redesigning master's programs; it then includes vignettes of institutions that successfully answered these questions when they redesigned their programs. Also included are a list of references and a list of resources, including web sites, that will provide assistance on this important topic.

Through this publication, Dr. Isenberg's intent is to provide guidance to those engaged in teacher preparation and development so that a new kind of master's degree comes about—a master's degree that deepens teacher knowledge of content-specific pedagogy with the aim of improving student achievement and student learning. This monograph advances the use of the National Board Standards and the National Board Certification process—all part of the professionalization of teaching.

I would like to express my appreciation to several individuals who have made this monograph possible. Particular thanks, of course, go to the leadership of the National Board for Professional Teaching Standards for its visionary goal of funding a visiting scholar position for professional development and higher education, and for making this monograph available to all IHEs. Also, thanks go to Stephanie Epp and Kathy Swann, NBPTS staff, and Francine M. Tompkins, University of Wisconsin System, whose insight and wisdom have been most valuable in finalizing this manuscript. In addition, I acknowledge the editorial work of Karen Bankston, who made sure that the manuscript met all stylistic specifications.

I explicitly recognize the contributions from faculty who are working diligently on realigning all or part of their master's degree programs with National Board standards, and who willingly shared their stories and work as examples for others. These institutions are:

California State University-San Marcos
Emporia State University
Florida A&M University
George Mason University
Louisiana Technical University
Morgan State University
Samford University
University of Central Florida
University of Louisville
University of Memphis
University of Minnesota-Duluth
University of New Mexico-Gallup Campus

I have an enormous debt of gratitude to Gary Galluzzo, former Executive Vice President of the National Board and my former Dean at George Mason University, for his confidence and unwavering support of my work. His visionary leadership and keen sense of commitment to teachers and the teaching profession have been a highlight in my professional life.

And finally, I want to thank my family for helping out in myriad ways and for tolerating my passion to do my part in helping to improve the quality of professional development for teachers. To them, I am deeply appreciative.

Joan Packer Isenberg
Visiting Scholar for Professional Development
and Higher Education Initiatives
Arlington, VA.
February 2003

In every state, the key elements of higher standards, deeper learning, aligned assessments, and consequential accountability for student learning have a significant impact on the way IHEs provide professional development for teachers.

Increasing public discussion of reforming American education has led to closer scrutiny of the quality of the nation's teachers. Debates about student performance and its link to teacher quality have questioned how Institutions of Higher Education (IHEs) prepare teachers and provide for their ongoing professional development. Research on effective teaching and teacher quality (Carnegie Corporation, 2002; Darling-Hammond, 2000, 2001; Stronge, 2002; Wilson, Floden, & Ferrini-Mundy, 2001) clearly shows the fundamental requirements for proficient teaching: knowledge of the subjects to be taught; knowledge of general and subject-specific methods for teaching those subjects and for evaluating student learning; knowledge of students and human development; and the skills, capacities, and dispositions to employ such knowledge wisely in the interest of students from racially, ethnically, and socio-economically diverse backgrounds. Thus, attaining the goal of education reform requires teachers who meet these standards for proficient teaching.

Current educational reform efforts are setting new parameters for how teachers are prepared and educated while in the classroom. In every state, the key elements of higher standards, deeper learning, aligned assessments, and consequential accountability for student learning have a significant impact on the way IHEs provide professional development for teachers. Moreover, high profile reports have anticipated a critical shortage of qualified P-12 teachers and have consistently concluded that a qualified teacher in every classroom is essential to helping all students learn. Those reports include the landmark *What Matters Most: Teaching for America's Future* from the National Commission on Teaching and America's Future (1996); *Teacher Quality: A Report on the Preparation and Quality of Public School Teachers* (1999); the Abell Foundation, *Teacher Certification Reconsidered: Stumbling for Quality* (2001); *Meeting the High Quality Teachers Challenge: The Secretary's Annual Report on Teacher Quality* (2002); and *A National Priority: Americans Speak on Teacher Quality* (2002). According to the National Commission on Teaching & America's Future (1996), a "blue-ribbon" group of 25 nationally recognized leaders funded by the Rockefeller Foundation and Carnegie Corporation, one major key to improving and transforming schools is to improve and transform the ongoing development of teachers. The work of the commission is based on teacher knowledge and performance, teacher retention, and the creation of conditions in schools in which teachers can teach and teach well.

At the same time, Schools, Colleges, and Departments of Education (SCDEs) have been criticized for not providing the kinds of advanced professional development for teachers in master's degree programs that address higher standards, which will strengthen teachers' practice and increase their accountability for student learning (Blackwell & Diez, 1998; Diez & Blackwell, 2001; Galluzzo, 1999b). This reality has propelled education schools to turn their focus to professional development for teachers rather "than on continuing education, or license renewal" (Galluzzo, 1999b, p. 8) in order to retain a cadre of highly qualified teachers (Cochran-Smith, 2002; Darling-Hammond, 2001, 2002; National Center for Education Statistics, 2001). Additionally, Blackwell & Diez (1998) have analyzed the needed changes for master's degrees for practicing teachers and suggested that framing advanced degrees around the National Board for Professional Teaching Standards (NBPTS) Five Core Propositions can help focus the degree on the ongoing professional development of teachers.

The NBPTS has defined high quality, advanced professional development for teachers through its standards, assessments, processes, and research. These benchmarks reflect what is known about good teaching and can inform advanced degree programs that provide professional development for teachers.

Founding of the National Board

In 1983, public concern about the state of American education was sharply heightened by the issuance of a federal report titled *A Nation at Risk*. The report provoked a wave of reform initiatives that engulfed the education community. Most of these programs, however, left out a critical element of the education equation: the classroom teacher.

Three years after the publication of *A Nation at Risk*, the Carnegie Task Force on Teaching as a Profession issued a pivotal report, *A Nation Prepared: Teachers for the 21st Century* (1986). Its leading recommendation called for the establishment of a National Board for Professional Teaching Standards to establish "high standards for what teachers should know and be able to do" and to identify teachers who meet that standard. This was accomplished in 1987 with the creation of the NBPTS.

Cornerstone of National Board Certification

A critical first task of the National Board was the development of a policy that would spell out the National Board's vision of accomplished practice. In 1989, it issued its policy statement, *What Teachers Should Know and Be Able to Do*, which has served as a basis for all of the standards development work the National Board has conducted. The statement has informed all educators and educational institutions with a strong interest in strengthening the initial and ongoing education of America's teachers, and it has served as a catalyst for healthy debate and the forging of new professional consensus on accomplished practice in each field of teaching.

Mission of the National Board

The mission of the National Board is clear. It seeks to advance the quality of teaching and learning by:

- maintaining high and rigorous standards for what accomplished teachers should know and be able to do,
- providing a national, voluntary system certifying teachers who meet these standards, and
- advocating related education reforms to integrate National Board Certification in American education and to capitalize on the expertise of National Board Certified Teachers (NBCTs).

The National Board's mission is executed through its Five Core Propositions that define accomplished practice, which are supported by theory and research on teaching and learning (NBPTS, 1998). The Five Core Propositions describe what teachers should know and be able to do:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of learning communities.

These propositions express the effectiveness, knowledge, skills, dispositions, and commitments of the accomplished teacher in every field and provide the basis for standards for accomplished teaching. As a result of the work of the National Board, teachers, like professionals in other fields, can achieve distinction by demonstrating through demanding performance assessments that they meet the highest standards of practice set for their profession. NBPTS asserts that the single most important way to improve education in the United States is to recognize and reward accomplished teachers through National Board Certification (NBPTS, 1998, 2000, 2002).

The National Board has led the vanguard effort to develop professional standards for elementary and secondary school teaching. Its responsibility is not only to ensure that teachers who achieve National Board Certification meet its professional standards of commitment and competence, but also to maintain standards and assessments that are so well regarded that America's accomplished teachers will decide to seek certification. Further, it capitalizes on the expertise of NBCTs to integrate the National Board standards into American education.

History of this Monograph

As part of educational reform and professional integrity, the National Council for the Accreditation of Teacher Education (NCATE) and NBPTS have formed a partnership to encourage SCDEs to develop standards-based master's degree programs designed to help teachers improve their practice and develop the tools to better assess their own effectiveness. Unlike many current masters' programs that focus on process, the revised master's programs will be geared specifically to improving both the content and pedagogy of teaching, which in turn will aid student learning (NCATE, 2001).

A major initiative from the NCATE-NBPTS partnership was the publication of five commissioned papers for institutions of higher education. These papers conceptualized a rationale for transforming the ways SCDEs prepare teachers and provide ongoing professional development for them. The papers have added to the knowledge base for the restructuring of master's degree programs for teachers through descriptions of (1) creating partnership between IHEs, local schools, and LEAs to improve teaching (Auton, Browne, & Futrell, 1998); (2) envisioning new forms of master's degrees for IHEs and particularly for SCDEs (Blackwell & Diez, 1998); (3) modifying existing advanced degree programs by incorporating NBPTS propositions as benchmarks that define accomplished practice (Blackwell & Diez, 1999); (4) using National Board Standards to shape and inform

practice in the continuing professional development of teachers (Galluzzo, 1999b); and (5) focusing on the importance of assessment in ensuring the quality of the master's degree (Diez & Blackwell, 2001). These papers were authored as part of the "National Partnership for Excellence in Accountability in Teaching (NPEAT) effort established by the U.S. Department of Education as a collaborative to enhance quality in teaching and teacher preparation" (NCATE, 1998, p. i). They provided the impetus to IHEs to reexamine their master's degree programs for teachers.

Furthermore, NCATE and NBPTS have jointly sponsored four partnership Conferences for Graduate Programs. These conferences were designed to assist faculty in using NBPTS processes to redesign advanced master's degree programs. An intended outcome for these four conferences was to assist faculty in providing the kind of ongoing professional development for teachers that would enable them to teach like NBCTs.

In addition to the commissioned papers and partnership conferences, NBPTS has published its own higher education monograph, *Advancing Teacher Development*, which described the way faculty at eight SCDEs transformed their existing master's degree programs for teachers into more coherent, standards-based programs. Those SCDEs have created programs "that elevate the conversation about the profession among teachers, and that create a more coherent wholeness in which being an educator includes membership in a distinct professional community," notes Galluzzo in the foreword (NBPTS, 2001a p. 5). These cases exemplify eight different ways IHEs have transformed their advanced degrees for teachers to enhance the quality of teachers and stimulate the transformation of excellence in professional development of teachers.

Since the publication of *Advancing Teacher Development*, many more IHEs have begun the process of redesign. They are seeking practical answers to the challenges that accompany this process and are hoping to learn from the lessons of others. Thus, this second monograph, *Using National Board Standards to Redesign Master's Degrees for Teachers: A Guide for Institutions of Higher Education*, is a follow-up to the first monograph and focuses on the particulars of redesigning master's degrees for teachers.

Although the particular culture of each institution is unique, SCDEs are part of the culture of higher education that presents one of the greatest challenges to transforming professional development into authentic programs for teachers.

Purpose of This Monograph

The purpose of this monograph is to show what is possible for SCDEs in redesigning authentic master's degrees for teachers. It is by no means a prescriptive document; rather, it offers many suggestions of ways to transform the delivery of master's degrees by reflecting the voices of higher education faculty and administrators who know the particular culture of their institutions.

Although the particular culture of each institution is unique, SCDEs are part of the culture of higher education that presents one of the greatest challenges to transforming professional development into authentic programs for teachers. This culture places a high value on autonomy within a research structure that recognizes and rewards particular kinds of publications. For teacher educators in particular, the reward system lessens the value of teaching and work in the public schools, making faculty more committed to producing a publication than to teaching and engaging in labor-intensive program development.

The norm of publication over teaching occurs within a culture of teacher educators that is characterized by other conventions of the academy. Traditionally, teacher educators are viewed as reacting to state licensing, regulation, and mandates rather than creating innovative and authentic degree programs (Tom, 1999; Wisnewski, 2001). Further, they continue to teach within SCDEs that remain compartmentalized and provide no incentives for liberal arts faculty to engage their colleagues who teach "educators." The lack of flexibility and security for faculty to "step outside the box" of traditional academia remains a major challenge to IHEs in the way they prepare teachers (Wisnewski, 2001, p. 8).

But the climate is changing. More focus is being paid to teacher quality, and IHEs across academic units are becoming aware that teacher quality is everybody's responsibility, not just that of the education faculty. Moving from a culture of isolation and autonomy to one of collaboration and common work is a necessary but challenging imperative for teacher educators to create high quality professional development within their advanced degree programs.

The NBPTS is leading the efforts to reform education by improving the quality of teachers. In higher education, improving the quality of master's degrees not only requires understanding teacher quality and good professional development but also necessitates understanding the dynamics of change and the ability to work in a climate that is challenging old ways of working with practicing teachers. The literature on change notes, "change has substance and form, content and process" (Hargreaves, Earl, Moore, & Manning, 2001, p. 184). Change is complex, time consuming, affected by context, and involves shaping and reshaping the personal and professional landscapes of those involved.

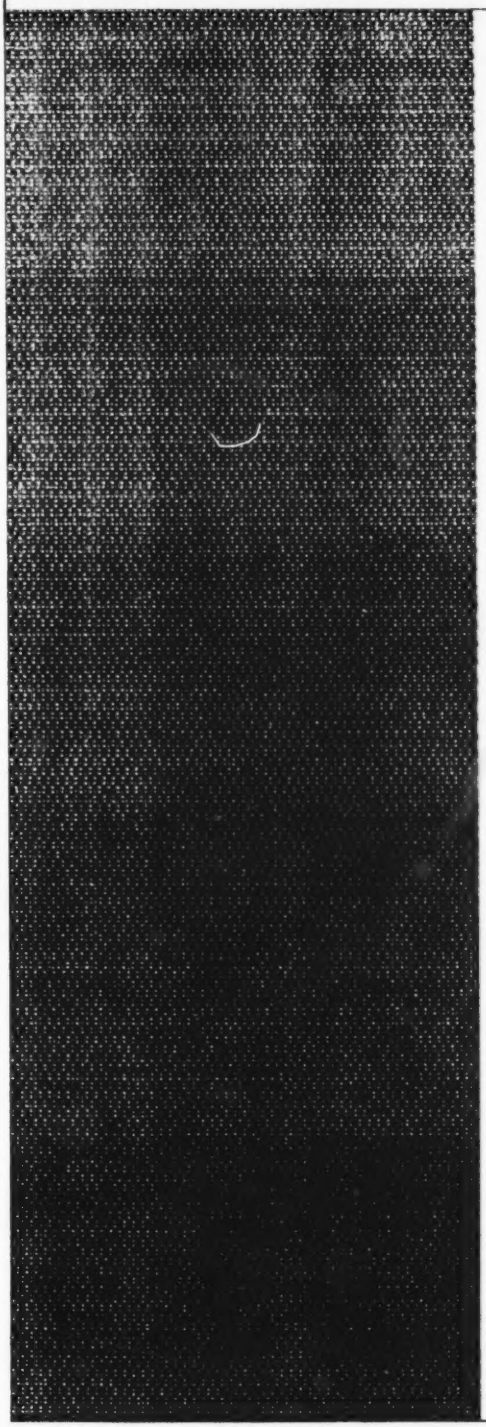
Understanding that most teachers have to unlearn old ways of teaching or learn in ways in which they themselves have not yet been taught is emotionally and intellectually demanding. This has implications for the way in which the degree is delivered. For those leading the change in the culture of SCDEs, being mindful of these characteristics is critical to creating new advanced degree programs that improve teachers' knowledge and skill in documenting, assessing, and improving their own learning and the learning of their students.

Organization of This Monograph

This monograph is organized into three parts. Part I provides the rationale for using National Board Standards as a lens to redesign master's degree programs for teachers. It provides a synthesis of the literature in which IHEs can ground their standards-based program development. Part II lists five common questions repeatedly asked by faculty about using National Board Standards as a framework to redesign master's programs. In Part II, I draw upon the literature and the practical experience of faculty who are deeply immersed in the redesign of their degree programs and provide insights into the lessons learned. Part III lists references and other resources for faculty to use as they engage in the redesign process.

PART I:

Rationale for Using National Board Standards as a Framework to Redesign Master's Degree Programs



USING NATIONAL BOARD STANDARDS TO REDESIGN MASTER'S DEGREES FOR TEACHERS:

A GUIDE FOR INSTITUTIONS OF HIGHER EDUCATION

National Board for PROFESSIONAL TEACHING STANDARDS™

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A major focus of the education reform movement is higher quality teaching that will improve the learning of the students they teach. For higher education, improving the quality of teaching and teachers means reconceptualizing advanced professional development. Critical conceptual work on redesigned master's degrees from NBPTS, NCATE, and highly visible policy reports has focused attention on the need for master's degree programs that emphasize quality, coherence, and relevance (Blackwell & Diez, 1998; Diez & Blackwell, 2001; Tom, 1999). Yet, some SCDEs continue to deliver degrees that lack these characteristics, while others are engaged in varying degrees of redesign (Anderson, Greeno, Reder, & Simon, 2000; Galluzzo, 1999b; Putnam & Borko, 2000). In this section, I examine the climate and conditions for redesigning advanced degree programs for teachers, identify salient research on teacher learning and professional development, address the importance of standards-based master's degrees using National Board Standards as conceptual organizers, and define the features of quality master's degrees for teachers.

Climate and Conditions for Redesigning Professional Development for Teachers

The conditions associated with the creation of master's degree programs for practicing teachers have changed over the years. All teachers are now accountable to new education standards set by national, state, and local regulatory agencies; new emphases on teaching content; and new professional expectations. Teacher effectiveness is increasingly measured by what students learn, and teacher quality is measured by both content and pedagogical knowledge. Such a context necessitates that SCDEs examine their models of continuing education for teachers offered through master's degree programs (Elmore, 2002; Galluzzo, 1999a; Putnam & Borko, 2000; Tom, 1999) to ensure that they are meeting the central imperative of education—that of improving the quality of the teaching force. The National Board has a central role in shaping the way SCDEs create new forms of professional development for teachers.

Access to high quality teachers is consistent with the agenda to professionalize the field through new forms of professional development. The focus on teacher quality calls for a qualified teacher in every classroom by 2006 (*No Child Left Behind Act,* 2001). National Board Certified Teachers (NBCTs) are recognized by the U.S. Department of Education as meeting the definition of highly qualified. The need for highly qualified teachers has propelled education schools to consider redesigned master's degrees as one way to meet this challenge. Using the NBPTS Five Core Propositions to conceptualize advanced master's degrees is compatible with IHEs' recognition that they are a worthy set of guidelines around which to frame an advanced degree (Blackwell & Diez, 1998, 1999; Galluzzo, 1999b). The National Board's Five Core Propositions address ways to support excellence in teaching by providing deepening knowledge, skills, and dispositions as the core of professional development. Likewise, the National Board Standards, assessments, and processes provide benchmarks for authentic learning experiences and assignments that address the needs of today's teachers.

Research on Professional Development and Teacher Learning

Research has long supported the view that the teacher is the single most important variable in student learning (Darling-Hammond, 2000, 2001,

2002; Elmore, 2002; Lieberman & Miller, 2001; McLaughlin & Zarrow, 2001; Wilson & Berne, 1999). Continuing professional development helps veteran teachers learn to meet new standards of practice and supports learning for teachers who reenter the profession after a period of extended absence. The literature on teacher learning and professional development shows that most powerful learning opportunities for teachers are anchored in student learning, include high standards, are content focused, develop ongoing collaboration and networks across teachers, share common norms of beliefs, and provide in-depth, focused learning experiences that relate closely to the classroom (Elmore, 2002; Hiebert, 1999; Schlecty, 1998). While the research base provides ways to design and deliver high quality professional development, it is limited in identifying empirical evidence on its effects on teachers' practice or its impact on student learning.

National Board processes offer a way for teachers to use data from their own practice and from the work of their students to demonstrate the impact of their teaching on student achievement. Using data from one's own practice to illuminate that practice and use it as a catalyst for change is one of the most powerful forms of evidence for authentic professional development (McLaughlin & Zarrow, 2001; NBPTS, 2001). A growing number of studies are documenting the relationship between teacher learning and classroom-based performance assessments (Falk, 2001). For example, growing evidence indicates that teachers learn more deeply about the strengths of diverse learners, engage in more focused observation and documentation of student learning, engage in more collaborative inquiry, and change the way they teach based on the use of assessments directly related to the work they are doing (Education Resources Group, 2001; Falk, 2001; McLaughlin & Zarrow, 2001).

The literature clearly delineates how teachers are being asked to work in ways for which many have not been prepared—"to engage in the systematic, continuous improvement in the quality of the educational experience of students and to subject themselves to the discipline of measuring their success by the metric of students' academic performance" (Elmore, 2002, p. 3). This perspective is counter to the ways in which many teachers are and have been prepared. Many of today's teachers were not hired to subject their practice to performance evaluations and to document their impact on student learning. For today's teachers, effective professional development requires new ways of investing in the knowledge and skills of practicing teachers and must include helping teachers use evidence and data to document their classroom practice.

Good professional development for teachers has features that characterize the ways in which adults hone their craft. The newly revised standards of the National Staff Development Council (NSDC, 2001) reflect what NSDC and the broader staff development community have learned about professional learning: Educators acquire the necessary knowledge and skills through results-driven, standards-based, job-embedded experiences (Schlecty, 1998). The 12 standards, all focused on the improvement of student learning, address learning in three major areas: context, process, and content. Figure 1 lists and describes each of these areas.

<Figure 1, NSDC Standards for Staff Development>

The literature on teacher learning and professional development shows that most powerful learning opportunities for teachers are anchored in student learning, include high standards, are content focused, develop ongoing collaboration and networks across teachers, share common norms of beliefs, and provide in-depth, focused learning experiences that relate closely to the classroom.

The descriptors of *context, process, and content* are pertinent to the redesign of master's degrees because they help focus learning experiences for teachers (Elmore, 2002; Galluzzo, 1999b; Putnam & Borko, 2000; Tom, 1999). Moreover, the descriptors mesh with the National Board Standards that provide benchmarks for highly accomplished practice that can inform professional development for those who are working toward accomplished practice. The research base and illustrative examples for incorporating each descriptor—context, process, and content—into advanced degree programs are elaborated in the next section.

Research Focusing on Context

Context addresses learning specific to individual settings such as learning communities, leadership, and resources. Some contexts require professional development that focuses on teacher-specific or teacher-initiated activities; other contexts demand a more systematic and direct approach. Regardless, acknowledging the powerful influence of contextual factors underscores the need for flexibility in designing master's degree programs for teachers. A major challenge for teacher educators is to create powerful learning experiences for teachers that will help them scrutinize their classroom practice so that it meets higher standards. At the same time, a prime criticism of advanced degree programs for teachers is that they offer learning experiences that are too removed from the realities of teaching to be meaningful (Guskey, 2003; Putnam & Borko, 2000; Schlecty, 1998). Since all knowledge is situated in some context, grounding teachers' learning experiences in their own practice is important. We know that using teachers' own experiences as the basis for their learning provides valuable opportunities for teachers to learn to think in new ways. We also know that authentic, engaging professional development for teachers involves opportunities for rich intellectual discourse about research, theory, and ideas associated with their practice in order to think differently. When these ideas are clear and compelling, teachers can apply them to their own classroom settings; when the ideas are too far removed from their practice, teachers will not use them to think differently. Yet, even when ideas are clear and compelling, the process of integrating new knowledge and skills learned in an advanced degree context into one's classroom is very challenging (Putnam & Borko, 2000; Schlecty, 1998). Two examples of compelling learning experiences that focus on context are case-based learning and discourse communities.

Case-Based Learning Experiences for Teachers. Learning experiences for teachers in university coursework typically engage them in reading and discussion of ideas. In contrast, their learning experiences in P-12 classrooms usually focus on the practice and problems of practice they face each day. Case-based teaching provides one approach for creating contexts for reconceptualizing compelling teacher learning in university settings while capitalizing on broadening the thinking and perspectives of its teachers through the lens of individual and group experiences (Doyle, 1990; Hammerness, Shulman, & Darling-Hammond, 2003; Merseth, 1996). Rather than relying solely on a teacher's particular classroom setting for addressing teaching dilemmas, cases provide vicarious encounters with similar contexts that address similar problems of practice. Addressing similar problems of practice in this way may provoke a level of teacher reflection and critical analysis that is not possible when acting alone in one's own context (Putnam & Borko, 2000; Shulman, 1987).

Advocates of case-based learning suggest that cases have several advantages over other activities. Cases "allow teachers to explore the richness and complexity of genuine pedagogical problems, ...provide shared experiences for teachers to examine together, using multiple perspectives and frameworks, ...afford the teacher educator more control over the situations and issues that teachers encounter, and [create an] opportunity to prepare in advance for discussion and other activities in which case materials are used" (Putnam & Borko, 2000, p. 8). The ability to analyze the complexity of teaching through teaching cases has the potential to provide teachers with the knowledge and skill needed to document their classroom teaching and its impact on student learning.

Discourse Communities for Experienced Teachers. A number of educational reformers have argued that for teachers to be successful in constructing new roles, they need opportunities to participate "in a professional community that discusses new teacher materials and strategies and that supports the risk taking and struggle entailed in transforming practice" (McLaughlin & Talbert, 1993, p. 15). The existing cultures and discourse communities in many SCDEs, however, do not capitalize on critical and reflective examination of teaching practice.

Research shows that learning is both an individual and a social process (Anderson et al., 2000; Vygotsky, 1978). We know that networks of professionals sharing concrete ideas and values about their work "have a significant effect on the development of new practices among experienced teachers" (Elmore, 2002, p.18). For this positive effect to occur, discourse communities must be engaging, immediately applicable to, and useful to teachers, and these communities must support teachers' work on new practice (Hargreaves et al., 2001; Wegner, 1998.

Thus, attention to context becomes essential in the design of advanced professional development for teachers. In addition to contextual factors, SCDEs must also attend to process, or the way in which teachers' knowledge and skills are improved and enhanced.

Research Focusing on Process

Process addresses the areas of evaluation, curriculum design, student learning, and collaboration through evidence and research-based data (NSDC, 2001). Currently, increasing attention focuses on the need to deepen teachers' knowledge and skills. Advanced professional development must encompass knowledge and skill in the discipline teachers are teaching, general appropriate pedagogy for the learners they are teaching, and specific discipline strategies to make content knowledge accessible to students (Elmore, 2002; Shulman, 1987). Pedagogical knowledge includes what teachers know and believe about teaching, learning, and learners that is not specific to a particular subject-matter domain. Professional development experiences that deepen teachers' pedagogical knowledge should be grounded in actual teaching practice and community needs, be collaborative and reflective, and mirror the expanding scope of teacher responsibilities as expressed in National Board Standards (Interstate New Teacher Assessment and Support Consortium [INTASC 1992; Putnam & Borko, 1997; 2000; Shulman, 1987). Examples of research that focuses on process—teacher collaboration and reflection and school-based and community learning experiences—follow.

Teacher Collaboration, Inquiry, and Reflection. Developing a culture of inquiry and reflection is central to establishing powerful professional development. Educational research has identified multiple kinds of knowledge (e.g., disciplinary, content, cultural, social) and skills (e.g., communicative, diagnostic) that teachers must possess to be effective in the classroom (Burroughs, Schwartz, & Hendrick-Lee, 2000). The emerging image of the professional teacher is one who thinks systematically about his or her practice in the context of educational research and the experience of others, and will work creatively and collaboratively as a member of a learning community. "Emerging research on teacher learning underscores the importance of professional development that focuses on learning in and from practice, and that concentrates on the combination of knowledge of subject, knowledge of teaching, and knowledge of particular groups of students" (Little, 2001, p. 37).

Developing a culture of inquiry and reflection is central to establishing powerful professional development.

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The more deeply teachers grasp the content they are teaching, the more they tend to emphasize conceptual, problem-solving, and inquiry aspects of their subjects. On the contrary, the less knowledgeable teachers are of the content they are teaching, the more they tend to emphasize facts and procedures.

Research focusing explicit attention on the *teacher as researcher* and *action research* is viewed as a powerful vehicle for deepening teachers' pedagogical knowledge and pedagogical content knowledge (Cochran-Smith & Lytle, 2001; Shulman, 1987; Tom, 1999). Most master's degree candidates seek out ideas and programs that have the capacity to help them increase student learning. Grounding teachers' learning experiences in their own practice by conducting activities largely in their own classrooms and school communities makes it likely that what they learn will indeed influence and support their teaching practice in meaningful ways and build the capacity to increase student learning (Cochran-Smith & Lytle, 2001; Putnam & Borko, 2000).

School-Based and Community Learning Experiences. Professional development must also be grounded in school and community environments that allow for and require professional consultation, collegiality, and collaboration. Such collegiality and collaboration should be embedded within teachers' daily work and include ongoing work on immediate problems of practice and student learning (McLaughlin & Zarrow, 2001).

Creating communities of teacher learners encompasses both individual and social perspectives (Anderson et al., 2000; Vygotsky, 1978). It also requires better understanding of the processes of learning, conceptual development, problem solving, and communication from multiple perspectives (Anderson et al., 2000; Greeno, Collins, & Resnick, 1996). These communities feature a culture of collective inquiry, prompting changes at the classroom and school level (Wegner, 1998).

Research Focusing on Content

Teachers' depth of knowledge of the subjects they teach influences their conceptions of how they teach that subject. Research shows that teachers' conceptions of teaching and learning in particular subject areas can be transformed through their observations and analysis of what goes on in the classroom (Wilson, Floden, Ferrini & Mundy, 2001). Much recent research has documented some of the important ways that teachers' knowledge of the subjects they teach shapes their instructional practice. The more deeply teachers grasp the content they are teaching, the more they tend to emphasize conceptual, problem-solving, and inquiry aspects of their subjects. On the contrary, the less knowledgeable teachers are of the content they are teaching, the more they tend to emphasize facts and procedures (Putnam & Borko, 1997).

Some researchers have found serious problems with the typical subject-matter knowledge of teachers, even of those who have completed majors in academic disciplines. Lacking full understanding of fundamental aspects of subject matter impedes good teaching, especially given the high standards called for in current reforms. Research suggests that changes in teachers' subject matter preparation may be needed and that the solution is more complicated than simply requiring a major or more subject matter courses (Wilson, Floden, & Ferrini-Mundy, 2001).

National Board Research

The impact of National Board Certification on student learning has been validated in a variety of studies, and evidence continues to grow. Research examining the impact of National Board Certification on student learning has found that NBCTs have a significant impact on student achievement and on teachers' own professional development and classroom practice. Consider the results of some of those studies.

The impact of National Board Certification on student learning has been validated in a variety of studies, and evidence continues to grow.

Impact on Student Learning

The Accomplished Teacher Validation Study (Bond, Smith, Baker, & Hattie, 2000), conducted by a team of researchers at the University of North Carolina at Greensboro, documents a significant difference in learning by students taught by NBCTs in comparison to students in other classrooms. This study demonstrated that NBCTs significantly outperformed their peers on 11 out of 13 key dimensions of teaching expertise.

Impact on Professional Development and Classroom Practice

Several studies report the impact of the process of National Board Certification on teachers' own professional development and classroom practice. Among these findings:

- Self-reported data from more than 1,150 candidates and NBCTs stated that participating in the National Board Certification process made them better teachers. Ninety-one percent responded that the process helped them develop stronger curricula and improved ways to evaluate student learning (NBPTS, March 2000).
- A survey of 256 teachers trained as assessors of National Board Certification portfolio and assessment center entries stated that they became more reflective about their teaching practices. Nearly half learned new teaching ideas and strategies, and a quarter became more selective about lesson content (NBPTS, Fall 2001b).
- Candidate surveys (NBPTS, 2001c) about the certification process indicate that:
    - 87% say the process of seeking National Board Certification is the best professional development they have ever experienced, while 91.6% believe they are better teachers as a result of participating in the process.
    - 79.5% report collaboration with colleagues is more focused on teaching and learning.
    - 89.1% say they have improved the way they assess and evaluate student learning.

A survey of 600 NBCTs in 13 states across 12 certificate areas with a 41% response rate shows the following:

- 91% say becoming an NBCT has positively affected their teaching practices.
- 83% are more reflective about their teaching.
- 80% say that achieving National Board Certification was better than other professional development.
- 75% have incorporated new instructional techniques or activities as a result of National Board Certification.
- 74% say their status as an NBCT has resulted in additional professional roles.
- 69% reported positive changes in their students' engagement, achievement, and/or motivation.

As one survey respondent noted, "When I plan my lessons, I maintain the mindset I had while going through certification and ask myself, 'What is the purpose of this lesson or activity?' If there is no educational reason behind it, I do not teach it" (Education Resources Group, 2001).

A survey of all 4,800 NBCTs certified before November 2000 regarding leadership roles yielded a 46% response rate and indicated that NBCTs are involved in a wide variety of teacher leadership activities. Most respondents said they most value their participation in mentoring or coaching activities and working with teacher preparation programs (NBPTS, February, 2001c). This survey reported that

- 99.6% say they are involved in at least one leadership activity.
- 94% report increased career satisfaction.
- 85% report an increased desire to remain in the profession.

The National Board has a commitment to research and making transparent its impact on the profession. It currently has underway 22 research studies that address important research questions related to the National Board's impact on low performing schools, student learning, and professional development. Results from these research studies will continue to advance the agenda of school reform.

Standards-Based Master's Degrees

Standards define what constitutes competence. The need for standards-based reform in teacher education results from public criticism that most degrees for practicing teachers are intellectually undemanding, lack content and quality, and are not results-oriented. To address these charges, SCDEs must provide advanced professional development for teachers that will help them teach in the way these standards demand--with deeper understanding of their disciplines and deeper ability to make that knowledge accessible to all students. In addition, this professional development must position all teachers with the knowledge and skills needed to seek National Board Certification (American Association of State Colleges and Universities [AASCU], 2001; Blackwell & Diez, 1998, 1999; Hargreaves et al., 2001).

The NBPTS has developed high and rigorous standards for accomplished teaching. These standards, developed by practitioners and scholars in 24 different disciplines, are used to evaluate a teacher's practice and determine that teacher's level of accomplished teaching. The standards embody a common core of knowledge, skills, and dispositions that represent the highest level of practice. Despite the existence of National Board Certification, not all practicing teachers receive professional development that reflects the National Board's processes. Some SCDEs are unaware of these standards, while others are already integrating National Board processes into their advanced degree programs.

As conceptual organizers, National Board Standards, assessments, and processes can address some of the problems associated with many existing master's degree programs. They make degrees more coherent, address real problems of schools and students, and provide opportunities for sustained, collaborative attention to teachers' classroom practice and student learning. While there is no one best way to align master's degrees in education with National Board Standards, there are programs from which we can learn what works best.

Using National Board Standards to frame advanced degrees for teachers offers SCDEs an opportunity to advance the development of high quality programs for teachers. They provide the substance for meaningful learning experiences that require teachers to demonstrate what they know and can do while developing knowledge and skills that emphasize content, pedagogy, inquiry, reflection, leadership, and collegiality. Board-like learning experiences require teachers to synthesize, apply, and demonstrate their knowledge of students, child development, content, and practice through evidence-based tasks that support their narratives on their practice. Teacher educators have an important role in designing standards-based degree programs that offer new forms of professional development for teachers who must be accountable for their students' learning (Blackwell & Diez, 1999; Guskey, 2003; Falk, 2001).

The National Commission on Teaching and America's Future (1996) recommended that "school districts, states, unions, and professional associations cooperate to make teaching a true profession, with a career continuum that places teaching at the top and rewards teachers for their knowledge and skill" (p. 94). In support of these aims, voluntary standards have been set by a number of professional groups to assure teacher quality across all levels and settings. Conceptually, these standards are closely aligned, providing a consistent framework for the continuum of teachers' professional development. This continuum of standards is focused on a set of shared knowledge, skills, and commitments to ensure that accreditation, licensing, and advanced certification standards are compatible and together form a coherent system of quality assurance for the profession. The National Board supports the notion of a career continuum. Its certification process contributes to its vision of supporting a comprehensive, fully articulated system of professional development for all P-12 teachers. Despite the scope of this vision, integrating the National Board's Standards, assessments, and processes into the professional development of teachers is far from a reality. Figure 2 describes the continuum with a special focus on advanced certification.

<Figure 2, Teacher Quality and the Continuum of Professional Development>

As conceptual organizers, National Board Standards, assessments, and processes can address some of the problems associated with many existing master's degree programs.

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Using National Board Standards to frame advanced degrees for teachers offers SCDEs an opportunity to advance the development of high quality programs for teachers.

Accreditation: Institutions accredited by NCATE must show how they prepare teachers to teach to the student standards developed by professional associations, as well as licensing standards for content knowledge, skill in curriculum planning, assessment, classroom management, teaching strategies for diverse learners, and collaborations with parents and colleagues.

Licensing: Interstate New Teacher Assessment and Support Consortium (INTASC) has created performance standards for beginning teacher licensing and is developing examinations to measure these standards. Evaluation of teaching is based on how well teachers can plan and teach for understanding, connect their lessons to students' prior knowledge and experiences, help students who are not initially successful, and analyze the results of their practice on student learning and adjust it accordingly.

Certification: The NBPTS standards-based assessment provides an opportunity for teachers to demonstrate accomplished practice through an extensive professional development activity. Teachers must develop a teaching portfolio to show how they use the National Board standards in their practice and take a written examination to demonstrate their depth of content knowledge in their teaching area. These performance-based and content assessments are evaluated by peer assessors trained on how to assess teachers' work in relation to standards.

As professional development occurs through a seamless continuum of teaching—from pre-service teacher preparation through the careers of experienced teachers—it has the potential to increase the quality of teaching by institutionalizing more rigorous professional preparation and development. Teachers and teaching will be accountable, and our best teachers will be able to attain the highest level of accomplished practice, all the while measuring up to genuine accountability through high quality learning experiences for all teachers (Falk, 2001). To achieve this vision, the field needs new conceptions of master's degrees for teachers that address quality.

Features of High Quality Master's Degrees for Teachers

As master's degrees for teachers remain under scrutiny, SCDEs must turn their attention to the features of high quality learning experiences for teachers. Quality master's programs for teachers have depth and focus, provide a coherent set of learning experiences, and have clear, relevant, and measurable outcomes. Blackwell and Diez (1998) offer six criteria for the development of the master's degree for teachers that are compatible with using National Board Standards as conceptual organizers. Figure 3 lists each criterion and describes its key components.

<Figure 3, Features of High Quality Master's Degrees>

In summary, using the National Board standards, assessments, and processes as a benchmark to reform master's degrees for teachers offers a promise of improving the knowledge and skills of teachers and addressing critical issues of education reform. Teacher educators who design graduate programs for teachers must focus their energy on designing, implementing, and sustaining their degree programs in ways that have fidelity with the spirit of improving the quality of teachers and teaching (Blackwell & Diez, 1998).

The next section, Part II, provides concrete responses to questions faculty generally raise about redesigning master's degrees. It uses examples and stories of practice from faculty at diverse institutions to illustrate the variety of approaches SCDEs are taking to improve the quality of their degree programs.

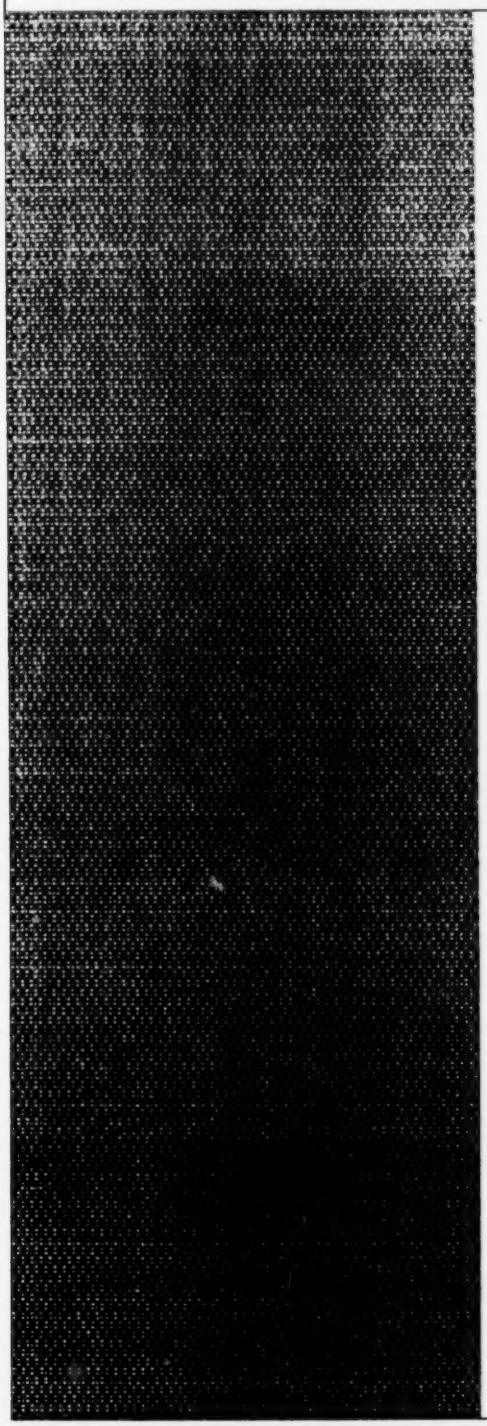
> *"(U)niversities play a unique role in providing the high quality, sustained professional development that will result in greater student achievement. They link research and practice. They also link pedagogy and ever deepening content knowledge needed by teachers. No other institution offers these elements for professional growth."* (AASCU, 2001, p. x)

As noted in the Introduction, master's degrees for teachers are under scrutiny, and consequently many are being redesigned, reinvented, and reframed. Some programs are using National Board Standards as conceptual organizers and benchmarks for these degrees. Faculty leading the redesign process often face similar challenges and issues as they begin the process. They are challenged by how to get started, how to incorporate National Board Standards and benchmarks, how to best form partnerships with Arts and Sciences, how to use NBCTs in the redesign, and how to conduct and use program data to show impact on student learning.

This section addresses these issues by raising five questions that faculty often ask as they think about the redesign process at their institutions. It lists the question, briefly places it in a context, and then concludes with illustrative examples from faculty in various SCDEs who are in some way involved in redesign using the National Board's assessment processes. The voices from the field cited here appear to have sustainability; that is, they have a solid history, a base of support, and a commitment to advancing the profession through redesigned master's degrees. Further, the examples cited incorporate board processes in ways that are consistent with the intent of the National Board and also reflect the local institutional culture and audience.

PART II

Common Questions about Using National Board Standards to Frame Redesigned Master's Degree Programs



USING NATIONAL BOARD STANDARDS TO REDESIGN MASTER'S DEGREES FOR TEACHERS:

A GUIDE FOR INSTITUTIONS OF HIGHER EDUCATION

National Board for PROFESSIONAL TEACHING STANDARDS™

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Question 1: How does an IHE get started in redesigning an advanced master's degree program using National Board Standards as its benchmarks?

Program design should focus on the six criteria cited by Blackwell and Diez (1998), described in Part I of this monograph and detailed in Figure 3. These include a focus on an overall conceptual framework; construction of a coherent sequence of courses, assignments, and experiences that are grounded in a strong theoretical framework and are interactive and participatory in nature; and a systematic means of assessing student outcomes. Because master's degrees should strengthen teachers' performance in the classroom, they must support teachers' efforts to improve student learning and develop the capacity to be leaders of their peers.

Conversations with higher education faculty about redesign often begin with the question, "But how do I get started in such a huge task?" Based on faculty experiences, "getting started" may be provoked by a variety of sources, such as a response to NCATE performance standards, a result of community partnerships, an extension of redesigned initial programs, or a dean's initiative. While the content and focus may differ from institution to institution, the process by which the redesign efforts occur is similar. Figure 4 provides general guidelines for successful program redesign followed by specific program approaches.
<Figure 4, Guidelines for Successful Program Redesign>
Examples and materials from Samford University (Alabama), California State University-San Marcos, the University of Louisville, and the University of Minnesota-Duluth are highlighted for their work in documenting the way they began the redesign process.

Samford University

The traditional master's degree program at Samford consisted of 33 hours of coursework with few clinical experiences or links with classroom experiences, although some case studies and problem-based learning were part of the curriculum. This program had remained substantially the same for several decades. Convinced that change was needed, education faculty reviewed current research, examined other programs around the country, and set up focus groups with teachers and principals to determine how a graduate program should prepare teachers for real classrooms. It became more evident that the old model was ineffective.

In the summer of 1999, the School of Education entered into a partnership with a local school system for the purpose of creating an advanced master's degree program that was designed around the recommendations of NCATE and the NBPTS and that concentrated on the concept of teacher leadership. The program was focused on successful, experienced teachers who had, for various reasons, never seriously pursued a master's degree. NCATE standards, NBPTS standards, and research-based data on teacher leadership and its effect on student learning and school reform provided the foundation of the program's conceptual design. Samford University School of Education faculty and teachers, central office staff, and principals jointly planned the program in the school system. This joint planning created ownership in the success of the program and is one of the keys to its effectiveness.

The two-year program for tenured practicing teachers is characterized by elements that focus on teaching as ongoing self-

improvement, teaching as collegial work, and a focus on student learning. The teachers involved in the program planned portions of the program content and closely coordinated the university coursework (graduate credit) with the school system's professional development program (non-credit). Program content is delivered through a combination of academic coursework and carefully crafted and closely supervised field-based experiential learning activities. Following is an outline of the program's content and sequence.

Year One: Non-credit requirements:

- Participation in a yearlong school improvement project
- Public presentation of project results
- Service as technology trainers for other faculty in the participant's respective schools
- Completion of Covey Training, all levels of 4-MAT Training, and active participation on local school and system leadership teams

Year Two: Intensive work designed to improve the cohort participant's classroom practice. Each teacher works extensively with the concepts and techniques of the National Board Certification process including:

- Completion of a portfolio of reflective writing, consistent with the standards of NBPTS
- Completion of a video of teacher's work in the classroom
- Written analysis of the strengths and weaknesses revealed in the video
- Submission of portfolio and video to a National Board Certified teacher for review and feedback
- Presentation of program activities before peer review panel composed of the superintendent and central office staff of the Jefferson County School System

Samford University faculty also identified some key lessons learned about change as they engaged in the redesign process. They noted that in preparing for major change it is the performance of the people that counts in terms of responding to the unexpected, providing leadership, and exercising sound judgment. They also noted that preparing for change involves an enormous amount of time listening to and soliciting information from the participants in the process in order to cultivate a sense of ownership for the project. For further information, contact Dean Ruth C. Ash at rcash@samford.edu; Deborah-Childs-Bowen at dachilds@samford.edu; or Maurice Persall at jmpersal@samford.edu.

California State University-San Marcos (CSUSM)

The redesign of CSUSM's master's degree began in the fall of 2000 when a number of faculty at CSUSM examined the philosophy, process, and standards of the NBPTS for infusion into the College of Education programs where appropriate. A team of faculty traveled to the CSU Network meeting, which included four partners: California State University San Marcos, North County Professional Development Federation, San Diego County Office of Education, and twenty-five North County School Districts, to formulate a plan for the college. From that plan came the commitment to offer a master's degree option that critically examines the National Board's processes through activities that mirror the rigorous yearlong process of applying for National Board Certification.

Several key forces led to the redesigned master's degree at CSUSM. These included a commitment of the administration and the CSU system to infuse National Board Standards into degree programs, knowledge of the National Board's processes by faculty involved in the redesign, and an existing master's degree that could be reshaped easily.

CSUSM engaged in critical steps toward the transformation of its existing degree, including involvement of teachers, formation of an advisory committee to guide its work, renaming courses to reflect a new focus on leadership and accomplished teaching, deciding which aspects of National Board assessments to incorporate into coursework as assignments, infusion of critical examinations and study of National Board Standards and implications for coursework, and the decision to "count" the school site portfolio as the core of the culminating experience. The CSUSM advisory committee, for example, was composed of staff development specialists from a school district with whom they were working, teacher's union representative who worked with a support network for NBC candidates, and two NBCTs who were already enrolled in the existing master's degree program. The advisory committee identified important professional skills that accomplished teachers should demonstrate and that should be incorporated into the redesigned degree program. CSUSM's redesigned master's degree contains three options for practicing teachers: (1) to study the National Board processes as one demonstration of accomplished teaching throughout coursework without pursuing certification; (2) to enter the program as an NBCT with the option of waiving one elective through taking a leadership role in the cohort and using the school site portfolio as the core of a culminating master's project; and (3) to pursue National Board Certification in the second year of the program, tailoring coursework to the entries needed for certification. For further information about the CSUSM program, contact Robin Marion at rmarion@csusm.edu

University of Louisville (U of L)

Funded by BellSouth Foundation to support the restructuring of its teacher preparation programs, U of L's efforts to redesign its master's degree focused on purposeful development of "Teachers as Learners and Leaders." The redesign process involved formation of a steering committee to assist with the development of a framework for the new program. Based on its work, the steering committee guided University of Louisville faculty and area school districts to reinvent new program offerings that would link graduate work to school change initiatives, focus intentionally on teacher leadership, and arrange students in cohort groups. The change process at U of L included faculty from the School of Education and Arts and Sciences, school colleagues, program graduates, current students, and members of the business community. In studying ways to redesign its program, participants studied alternative models of graduate education, conducted needs assessments, and developed program guidelines. While doing this work, they developed their professional knowledge, leadership capacity, and vision of change.

One of the pilot cohort teams focuses on seeking National Board Certification. The study of this group includes development of a portfolio component; a research methods course that involves designing, implementing, and assessing an action research project directly connected to teachers' day-to-day practice; and a core readings course. The core

readings course includes general readings about leadership and change, which all teachers study, in addition to specific readings related to the cohort theme of study. For further information about U of L's advanced degree, contact Diane Kyle at diane@louisville.edu

University of Minnesota-Duluth Campus (UMD)

In recent history, the College of Education and Human Service Professions (CEHSP) at the University of Minnesota-Duluth had delivered its master of education degree primarily through the Continuing Education unit of the university. A variety of cohorts had been organized, both on- and off-campus and using distance technologies. A cohort facilitator, usually on overload contract, would deliver most of the instruction with supplemental expert presentations. When CEHSP expressed a strong desire to "take back" the program, the university provided funding to support delivery of the graduate curriculum. At the same time, as the Department of Education prepared for an NCATE visit, faculty learned of the alignment of NBPTS Five Core Propositions with NCATE standards. A CEHSP team attended the NBPTS/NCATE Conference in Reston, Virginia, in April 2002 and returned to campus convinced that revamping the master's degree program should be aligned with the Five Core Propositions and should provide completers with the knowledge and skills needed to seek National Board Certification. Figure 5 shows the UMD matrix for the redesigned master's degree aligned with NBPTS Core Propositions and activities.

<Figure 5, UMD Matrix>

The UMD Associate Dean maintained contact with NBPTS staff with questions on approach and content. In October, three National Board staff members came to the UMD campus to consult with education and arts and sciences faculty and to present a program on National Board Certification to area school personnel and legislators. That visit was a pivotal point in developing the momentum among all faculty to participate in curriculum development. The educational value of the presentation also helped UMD faculty develop the foundation for recruiting efforts.

Two local NBCTs were recruited to consult on curriculum revision. Eight graduate courses were restructured to align content with the National Board's Five Core Propositions while maintaining the focus of the department's learner-sensitive model. The Graduate Program Council approved a reflective practice portfolio as an option for the final product requirement of the degree.

The first delivery of the restructured courses began in January 2003 to UMD's third distance cohort, with 20 students from across the state of Minnesota. A resident cohort is scheduled to begin in June. During spring semester, the faculty is focusing on development of an assessment program and development of elective courses for certificate areas. For further information, contact Jackie Millslagle, Associate Dean, at jmillsla@d.umn.edu

As with any new endeavor, SCDEs should begin with changes that make sense in their own institutional culture.

As SCDEs consider redesign, it seems wise to remember to start with a core group of committed faculty; build a base of knowledge, support, and trust within the SCDE, institution, and P-12 community; include variety of stakeholders; and expect to move slowly. As with any new endeavor, SCDEs should begin with changes that make sense in their own institutional culture.

Question 2: What are some ways that IHEs have used National Board Standards and processes as benchmarks to redesign their advanced master's programs?

National Board assessment tasks distinguish themselves as a learning challenge because they are a tested means of having teachers demonstrate their knowledge and skills in real classrooms with real students. Using performance-based assessments similar to those employed by the National Board (i.e., reflective writing, analyses of student work, analyses of practice through videotaping) in higher education requires faculty to think differently about their programs to focus their teaching on helping teachers to document their learning and the learning of their students.

To illustrate, engaging in the kinds of learning experiences that simulate those required for the NBPTS school site portfolio entails deep reflection on teaching practices and close scrutiny of student learning. Having to provide evidence-based materials on how assessment informs their teaching provides teachers with the structures they need to scrutinize their practice and articulate their knowledge of student learning (Falk, 2001).

Moreover, National Board assessments have other qualities that provoke powerful learning. The portfolio entries are notable for delineating a clear and detailed explanation of the task, providing a scoring rubric at the outset, and offering explicit guiding questions. Each task details the purposes and the standards the task is designed to assess. Thus, board-like tasks and activities provide a vehicle for teachers to carefully document how their practice demonstrates the knowledge, skills, and dispositions that meet the standards (Falk, 2001).

Incorporating assessments and tasks similar to those employed in the National Board Certification process is characteristic of a number of programs. Examples from California State University-San Marcos, George Mason University, Morgan State University, and Louisiana Tech University, the four institutions piloting the Digital Edge Project; the University of New Mexico at Gallup for work on videotaping and reflective writing, and George Mason University and University of Central Florida for their work on portfolios are described here.

California State University-San Marcos, George Mason University, Morgan State University, and Louisiana Tech University, Pilot Institutions for the Digital Edge Project.

The NBPTS, in conjunction with these four pilot institutions, has launched a web-based Digital Edge project to demonstrate how NBCTs integrate technology in the classroom. While the pilot is explicitly aimed at pre-service preparation, the Digital Edge project videos can easily serve practicing teachers by using them as exemplary teaching models for technology integration and studying the NBPTS Standards. The Digital Edge lessons and other materials, called "exhibits," correlate to the National Board Standards, ISTE (International Society for Technology in Education) standards, and state/local standards. Each exhibit contains an introduction, lesson plan, video clips, student work samples, assessment tools, resources, research, and teacher and student reflection.

In advanced degree programs, the Digital Edge exhibits serve as focal points for *professional discourse* and *reflection* on classroom practice among practicing teachers. Specifically, the exhibits are being used to deepen teachers' conversation with one another about their practice, to

provide a *student-centered* means of helping teachers articulate their own connections between their practice and that observed in the exhibits, and to illustrate how to link their practice to the National Board Standards being addressed. For further information, explore the web site for the Digital Edge Project at http://newali.apple.com/ali_sites/deli/index.html

Another use for exhibits of teaching practice featuring NBCTs from the Digital Edge project is direct access to a second web-based project, *Opening Classroom Doors*. This project uses video segments, with accompanying text and commentary, to provide an insight into classrooms of accomplished teachers. Each page in the exhibit includes one or more video clips, text by the authoring teacher describing the content of the lesson and reflecting upon the clip, and commentary by other NBCTs and university faculty. For further information, go to the home page for <Opening Classroom Doors>.

University of New Mexico at Gallup (UNMG)

The University of New Mexico at Gallup bases its Master of Arts in Education degree on the NBPTS Five Core Propositions and Standards. Figure 6 shows how UNMG uses National Board Standards as benchmarks for courses in their master's degree program.

<Figure 6, University of New Mexico at Gallup Course Correlation Matrix>

Two illustrations of how UNMG incorporates board strategies are *reflective writing* and *analysis of practice through videotaping*. By using *writing as a way of knowing*, UNMG supports teachers' use of writing for different purposes to develop thinking in different settings and in different subject and content areas. Through the use of the Middle Childhood Generalist Portfolio Entry on Writing, for example, teachers show how they use writing as a strategy to support worthwhile goals for student learning. They must also provide evidence of their ability to describe, analyze, and evaluate student writing and use student work to reflect on their practice. Using a Level 4 Rubric, the highest level of the rubric that is correlated with that of the National Board, requires teachers to provide *clear, consistent, and convincing* evidence in their responses. In this rubric, UNMG teachers must:

- provide clear and consistent opportunities to engage students in meaningful exploration of ideas through the use of writing.
- create instructional opportunities that help students develop as independent learners and thinkers.
- understand and respond to the varied needs and strengths of students.
- describe, analyze, and evaluate student work and classroom instruction with insight about students and their writing as a means of thinking.
- give students appropriate and constructive feedback.
- engage in reflective thinking that suggests a clear understanding of past teaching and constructive suggestions for future teaching.
- edit and proofread final drafts so that mechanical errors do not impede comprehension.

In addition to specifying performance outcomes at the outset, UNMG uses the exact criteria for the entire National Board entry as the vehicle for reflective writing.

UNMG also incorporates analysis of teaching through videotapes. Figure 7 provides UNMG's step-by-step procedure for analyzing videotapes of practice. It also provides the criteria for self-assessment. For more information, contact Pat Stall at patstall@unm.edu

<Figure 7, Videotape of Teaching Episode Analysis and Criteria>

George Mason University (GMU)

In keeping with program goals, GMU's Advanced Studies in Teaching and Learning Program (ASTL) has developed a performance-based portfolio that all program participants complete. This portfolio provides concrete evidence of participants' teaching practice, the growth of their critical reflection, their learning through action research, and their expertise in an area of choice. Scheduled portfolio assessment points occur at the mid-point and completion of the program.

A performance-based assessment tool, the ASTL Professional Development Portfolio was developed over the course of an entire academic year. The portfolio is based on both academic and empirical research, as well as portfolio development expertise gained from several years of work on the part of its principal creators. The comprehensive portfolio links the ASTL program requirements with national, state, and institutional professional standards. Both formative and summative reflections enable participants to make important connections between program coursework and daily encounters with student learning in the context of their school-based experiences. The written portfolio guidelines provide a format for the presentation of participants' knowledge and practice as articulated by the NBPTS and the Graduate School of Education.

The ASTL portfolio, in its pilot year of implementation in academic year 2002-2003, consists of four parts. These are:

I. Professional Documentation
II. Evidence of ASTL CORE Knowledge
III. ASTL Emphasis Area
IV. Portfolio Presentation: Synthesizing Knowledge and Looking Ahead

The Professional Documentation section, Part I, is completed first because it contains preexisting candidate professional information. Either of Parts II or III is completed according to the sequence in which they are taken in the master's program (i.e., the core courses may precede or follow the emphasis area completion). The final section, Part IV, on portfolio presentation and synthesis, is completed by the candidate as an oral presentation at the conclusion of the degree program. (See Figure 8, ASTL Portfolio Articulation Chart for an overview of the portfolio contents.)
<Figure 8, ASTL Portfolio Articulation Chart>

The portfolio guidelines suggest course products that could provide evidence of core knowledge. Each section has a focused "Reflection Point" where candidates are asked to connect the knowledge gained from the core courses and course products to the NBPTS and GSE principles. Candidates are also asked to reflect on program impact on their learning and, in turn, on the learning of the students in their classrooms. The final section is a comprehensive reflection and synthesis of knowledge attained in the core. This is presented orally.
The following guidelines concretize reflection points.

GMUs Guidelines and Suggested Format for Reflection Points

Length: No more than two pages

Focus: Each reflection point focuses on interpretation and analysis of learning by synthesizing knowledge from that learning module.

Format: Each reflection point interprets and examines why and how the performance-based course assessments provide evidence of the ASTL outcomes addressed in that learning module. Here you will discuss the impact of your learning on your teaching practice and its impact on student learning.

For example, the coursework for the first learning module is comprised of two courses that focus on Inquiry into Practice and How Students Learn. This module is aligned with NBPTS Core Propositions 1, 3, and 5 and engages program candidates in course experiences and performance-based assessments that model National Board processes and assessments. Program candidates reflect on how coursework, related readings, and performance-based assessments have led them to think more deeply about their learning and their learners through their first reflection point. The directions for this reflection point read:

> *Candidates, in this section you will reflect on your own learning and that of the students in your classroom. The reflections and the performance-based assessments you include provide evidence of your knowledge and skill in understanding learning and learners and your impact on student learning. Your reflections should address one or more of the following outcomes and show how your course assessments provide evidence of your knowledge:*
> *1) commitment to student learning*
> *2) managing and monitoring student learning*
> *3) members of learning communities*

The oral portfolio presentation provides candidates the opportunity to articulate connections and conclusions drawn from coursework and teaching experiences throughout the program and to explain how they relate to the ASTL Outcomes (NBPTS/GSE Principles and Outcomes). They are also asked to comment on the most powerful learning experience and change that took place during the degree program. The presentations are done in a round table format with program instructors and fellow program participants in attendance. The portfolios are evaluated by instructors and self-evaluated by candidates. The evaluation rubric is currently under construction and will be circulated upon completion and piloted during the presentations. For more information, contact Rebecca Fox at rfox@gmu.edu.

University of Central Florida (UCF)

UCF has one class of "Education Specialist" students who used their portfolio as the project at the end of their program of study. During the first year of coursework, the students were pre-candidates and completed simulated portfolio entries from their own practice. (All of these students have now achieved National Board Certification!) The four courses UCF offers as candidate support are transferable into advanced degree programs in the college. The projects in those classes are all oriented to the principles and processes of National Board Certification. For additional information, contact Marty Hopkins at hopkins@mail.ucf.edu

Question 3: What strategies can SCDEs use to involve Education and Arts and Sciences faculty in the redesign process?

There is an enormous need for greater collaboration between teacher education and the rest of the academic disciplines in conceiving new, innovative master's degrees for teachers that combine content knowledge with the appropriate pedagogy to teach that knowledge. Historically, master's education degrees for teachers have placed little or no emphasis on content. For elementary teachers, the problem is particularly acute due to the lack of adequate undergraduate preparation in a subject area because of their need to teach multiple subjects. Teachers often need both the broad view of the discipline and an in-depth concentration.

SCDEs and Colleges of Arts and Science (A&S) faculty must work together to assume responsibility for the professional development of teachers in their disciplines. Educational leaders at all levels applaud the experimentation—new master's degrees that combine a focus on content and pedagogy, integration of A&S faculty and faculty from education, and experimentation with innovative delivery models. Examples from University of Memphis, Emporia State, and Florida A&M University have notable work in this arena.

University of Memphis

At The University of Memphis, collaborative efforts between Education and A&S faculty in teacher education program design historically have not been typical. Truly interdisciplinary initiatives have been limited in number and have involved few faculty. It is significant that of 14 outreach programs for K-12 students, 12 examples of faculty involvement in teacher training and curriculum reform initiatives, and 27 basic or applied research projects listed by faculty of the College of Arts and Sciences for 2002, none involved faculty from the College of Education. Faculty from both colleges have regularly partnered with groups of students and/or teachers, individual schools, or local school systems, but they have not formed partnerships with each other.

The university now has new deans in both colleges who respect each other personally and professionally. They have approached their college leadership roles believing that collaborative efforts are not only beneficial but necessary, and they have engaged in planning to achieve that goal. Eventually, they expect faculty in their respective colleges to work cooperatively to examine and redesign teacher education programs. However, their first challenge is to jointly design and champion a major cultural shift.

The first step in preparing for new ways of working together was a simple act with a strong message. This fall, the Dean of the College of Education met with Arts and Sciences Faculty, and the Dean of Arts and Sciences met with faculty of the College of Education. They discussed areas of common interest and responsibility, highlighting areas in which outreach, professional development, and research would benefit from shared expertise.

The colleges have now made plans for an Institute for Excellence in Teaching and Learning, the purpose of which is to develop a comprehensive approach to improving and sustaining the highest levels of teaching and learning in the Memphis region. They plan to collaborate in the areas of recruitment, formal teacher preparation, and continuous professional development for teachers, capacity building at school sites, and research and development.

Three themes guiding all work at The University of Memphis are: Investing in People, Building Partnerships, and Creating Interdisciplinary Initiatives. For these themes to be realized at the program development and classroom instruction levels, administrators at both the university and college levels must first embrace them. To use Schlechty's (1998) often-repeated mantra, faculty will only *respect* and engage in cross-college collaboration when administrators continually make clear their *expectations* and back them up with reward systems. For further information contact Marty Alberg at malberg@memphis.edu

Emporia State University

At Emporia State University, there is a long tradition of cooperation between the Teachers College and the College of Liberal Arts and Sciences. The greatest link and continued cooperation occurs because Methods courses are housed in their respective departments, both in Elementary Education (i.e., Art, Music, Biology, Physical Science, Math, and English) and all secondary education majors in the College of Liberal Arts and Sciences. This organization is based on the fundamental belief that a methods teacher, housed within a specific discipline and holding an advanced degree, is best equipped to teach the content of that discipline. A biologist, chemist, or English professor is best suited to deliver this content.

Housing Methods faculty in their respective A&S departments works well because departments evaluate methods professors on what they do—namely, teach methods courses, supervise content materials of student teachers, and complete scholarly work on teaching. In short, each department in Liberal Arts and Sciences has a methods professor with experience in K-12 settings and an advanced degree in the discipline. Merit, tenure, and promotion are based on what faculty do to meet their responsibilities for teacher education. This historical interaction supports several manifestations of cooperation:

- Joint support of the Science Education Center housed in the Department of Physical Sciences. The center loans materials and equipment to area teachers.
- English as Second Language and Bilingual/Multicultural Education program, which is a joint effort between the two colleges through support of a position.
- Membership in the Project 30 Alliance, which requires cooperation on joint projects as part of the membership requirements. Membership was not renewed this year due to budgetary constraints.
- A Multicultural Diversity Outcomes grant via the campus Project 30 group, which employed the talents of members from both colleges to draft the grant and act as a steering committee/task force to supervise the grant program, which assessed diversity outcomes in teacher education.
- General Education Council representatives from all degree-granting schools/colleges, providing a diversity of voices from across the campus on the impacts of assessment or restructuring.
- Council on Teacher Education, which formulates and recommends education programs and has representatives from each department involved with education.
- Ethnic/Gender Studies concentration, which is available to Elementary Education majors and was developed as joint project.
- One Master of Arts in Teaching, which is extant in Social Sciences and

includes required courses from the Teachers College along with discipline courses to meet the 36-hour requirement for the degree.

- The creation of summer master's degree programs by several departments in Physical Sciences and Biological Sciences that allow practicing teachers to earn the degree over the course of several summers by altering course delivery to meet curricular needs.
- NCATE steering committee, with cross-college representation. Liberal Arts & Sciences faculty attended NCATE training and serves on the State Standards Boards. Liberal Arts & Sciences faculty have also served on NBPTS Standards boards.

For further information, contact Rodney Sobieski, Associate Dean, College of Liberal Arts and Sciences (sobieski@emporia.edu) or Linda Hazel, Director, Great Plains Center for National Teacher Certification (Hazellin @emporia.edu).

Florida A&M University (FAMU)

In Florida, the K-20 Board of Education is responsible for coordinating a seamless statewide education system. Included in this continuum, is The Florida Collaborative for Excellence in Teacher Preparation, composed of 10 institutions of higher education (IHEs) that have a designated liaison faculty member from each IHE. The purpose of this collaborative is to increase the number of teachers in math, science, and technology. Florida is attempting to identify ways to expose its academic subject majors to aspects of education because many of them teach on emergency credentials following graduation. FAMU has used the Florida Collaborative as a vehicle to provide some education background to its subject area majors while simultaneously creating an awareness of the possibilities of teaching as a career option at the K-20 level.

For FAMU faculty, the combined structure and culture of the Florida Collaborative and FAMU's continuing commitment to university wide teacher education offers possibilities for collaboration with Arts and Sciences faculty. At the beginning of each academic year, for example, all FAMU faculty participate in is a required three-day professional development symposium. National Board standards are always included as part of this professional development.

FAMU's collaborative strategies with Arts and Sciences faculty occur primarily through existing university wide professional development and grant funding. The following are examples of the strategies that work best for FAMU.

- Embeds National Board standards into K-20 collaborative grants for Florida and federal funding sources. For example, if any RFP has to guarantee teacher quality, FAMU grant writers use the National Board standards be the guidelines for teacher quality.
- Creates awareness of National Board standards by distributing National Board materials at general sessions of the Florida collaborative or offering a session on professional development to provide more depth on National Board, such as the National Board's scoring policy, or electronic portfolios.
- Incorporates National Board as a strand in grant writing, where relevant.
- Attempts to find a "fit" with the interests of Arts and Sciences faculty and RFPs. For example, as a result of obtaining a NASA Math grant to strengthen the knowledge and skills of math and science teachers in local area underachieving schools, FAMU Arts and Science and Education faculty work together to deliver the content to Arts and Science teachers.

These structures provide opportunities for all faculty to own key experiences that are developed and delivered to teachers to increase teacher quality. For further information, contact Norish Adams, coordinator, National Board Resource Center at norish.adams@famu.edu or Gwendolyn Trotter, Vice-President Institutional Effectiveness and Technology at gtrotter@livingstone.edu

Understanding and using the specialized skills and talents of NBCTs are a hallmark of redesigned master's degrees.

Question 4: What is the role of NBCTs in the redesign of advanced master's degrees?

NBCTs play a role in many programs, but some SCDEs have made the role of NBCTs central to their program redesign. Having NBCTs participate in program development for teachers bridges the gap between professional development created by faculty without connection to schools, or by school district personnel without connection to the university. For SCDEs, having available a new and rich human resource that heretofore has not been available offers opportunities for new partnerships for a common purpose—that of improving the quality of our teachers.

Because NBCTs are so thoroughly grounded in National Board Standards and processes, many SCDEs are using them to support candidates' journeys through the certification process and to assist faculty in providing authentic professional development and assessment. This resource enables SCDEs to have access to a larger professional vision of what it means to engage in authentic self-assessment that stimulates professional growth. Thus, using NBCTs who understand the National Board Standards and the commitment needed to achieve National Board Certification brings a higher degree of credibility to the degree-granting institution.

NBCTs have a critical role to play in spreading the word about what accomplished teaching is and how one develops the knowledge and skills to attain this level of professionalism. The delivery of well-developed standards-based and performance-based assessments by NBCTs helps initiate a dynamic process—an "upward-spiraling double helix" of standards and performance that has the potential to transform the culture of teaching. Figure 9 graphically represents the nature and development of accomplished teaching.

<Figure 9, The Architecture of Accomplished Teaching>

Understanding and using the specialized skills and talents of NBCTs are a hallmark of redesigned master's degrees. Results from a recent NBPTS survey of Higher Education Institutions (2002) indicate that IHEs are using NBCTs in a variety of leadership roles. These include, but are not limited to, using NBCTs as instructors, adjunct faculty, tenure-track faculty, clinical faculty, mentors, and facilitators. Examples of IHEs capitalizing on this resource are the University of Central Florida (UCF), Mississippi Valley State University (MSVU), and Southern Illinois University at Carbondale.(SIU-C).

University of Central Florida (UCF)

UCF has utilized the expertise of NBCTs to incorporate National Board standards into its Exceptional Education master's degree program. NBCTs served on an advisory committee whose purpose was to offer advice about revising coursework in the existing program of study. As a result of this work, all Exceptional Education students now take one of the National Board Candidate support classes during their first term in the program. In this class they learn about the three kinds of writing required in the portfolio and complete a simulated student work entry. In addition, the standards (and appropriate assignments) have been added throughout the entire program of study.

Planned for the near future will be the formation of another advisory committee of NBCTs representing diversity of certificates and geographical location for the purpose of designing a track for the Curriculum & Instruction

masters and higher degree programs in teacher leadership. Courses will be designed to assist NBCTs to hone their skills as leaders in curriculum, policy, and mentoring while staying in the classroom. Projects and assessments in these courses will no doubt include those that will be helpful as the NBCTs work toward renewing their certificates. For more information, contact Marty Hopkins at Hopkins@mail.ucf.edu

Mississippi Valley State University (MVSU)

Mississippi Valley State University, located in the heart of the Delta region of Mississippi, has employed an NBCT to be deeply involved in the redesign of its master's program for teachers. The university initially involved an NBCT who taught a master's level required course as an adjunct professor during the spring and summer semesters of 2001. In August 2001, MVSU employed the same NBCT as an assistant professor in the Education Department to teach both graduate and undergraduate classes.

A major goal of employing an NBCT on faculty was to assist in integrating the National Board's Five Core Propositions into coursework. Because of the NBCT's familiarity with standards-driven documentation, MVSU used the NBCT's knowledge base to readily and effectively engage in preparing for the NCATE assessment, which is also standards-driven. Additionally, MVSU used the skills of the NBCT to assist with the redesign of the Master's of Education Comprehensive test questions, employing the analytical structure of the entry questions in the development of the National Board portfolio. Currently, the institution is engaged in aligning the objectives of the master's level courses with the Early Childhood Generalist and Middle Childhood Generalist standards established by the National Board.

Many of the degree candidates were interested in seeking National Board Certification and encouraged MVSU to start a candidate support program. The dean assigned that task to the NBCT. Establishing a candidate support program involved developing a proposal, curriculum, program framework, and implementation plan. Several of the program candidates are graduates of Mississippi Valley State University's Graduate Program. The current success of MVSU's candidate support program is a direct result of using the skills and knowledge of NBCTs as faculty. For further information, contact Lula More at lulamore@yahoo.com

Southern Illinois University at Carbondale (SIU-C)

At SIU-C, faculty of the graduate specialty area of Teacher Leadership (TL) within the Department of Curriculum and Instruction wanted to align the coursework of its specialty area as much as possible with the NBPTS process, from pre-candidacy through certification. Faculty believed it was critical to have NBCTs involved in both planning and delivering the aligned courses. The dean pooled resources from the college, university, and the Illinois State Board of Education to create a two-year, full-time NBCT-in-residence position.

From Fall 2000 through Spring 2002, an NBCT who had completed her master's degree in Teacher Leadership and was working on a doctorate in the same specialty area took a leave of absence from her district to become an NBCT-in-Residence at SIU-C. Because she was a graduate of this institution, she was familiar with its course offerings. She was also actively involved with NBPTS at the local, state, and national levels and therefore was well networked and aware of existing resources. During the

first semester, the NBCT in Residence helped faculty to develop a new course, Documenting Accomplished Teaching (see Figure 10-9 for syllabus). This pre-candidacy course provides teachers with an overview of the National Board Certification process and encourages the development of self-assessment and reflective teaching practices.

<Figure 10, Syllabus for Documenting Accomplished Teaching, SIU>

To develop the course, the NBCT researched other graduate programs aligned with NBPTS and met with other NBCTs who were affiliated with universities to develop a syllabus. Then the NBCT recruited for and taught the course during spring semester of 2001 and 2002.

Simultaneously, SIU-C revised the syllabus for an existing course, Systematic Observation and Analysis of Instruction, which already contained many of the skills essential to the achievement of National Board Certification. The course incorporated "Tips for Videotaping" from NBPTS (see Figure 11) and added a requirement that students spend at least five hours videotaping classroom interaction and then share some of the videotape.

<Figure 11, "Tips for Videotaping">

Students are also required to spend time on the NBPTS web site (www.nbpts.org) and to use the course's electronic discussion site to share what they have learned and what questions they have about the certification process. The NBCT-in-Residence monitors the web discussion and then invites another local NBCT to join the discussion on issues related to National Board Certification.

All students in the Teacher Leadership master's program complete a 3- to 6-credit hour practicum after they have done most of their coursework. SIU-C gives credit for any hours committed to the National Board Certification process toward completion of that practicum and offers support sessions for all local candidates. Those who wish to count that work for academic credit may do so by registering for practicum hours.

Having an NBCT-in Residence is critical to aligning graduate programs with NBPTS, and having this person full-time is essential early in the process. With drastic reductions in state funding, SIU has not had an NBCT-in Residence this past year, and it has significantly slowed the program's momentum.

Like most change in education, the process is slow. Attracting rural teachers without financial incentives to the NBPTS process takes time. SIU-C's teacher-in-residence networking with professional organizations and regional superintendent's offices had begun to result in more interest from teachers by the end of her second year with the program. The suspension of the teacher-in-residence position has slowed down recruitment efforts considerably, but because the coursework is formalized, it will be easier for the program to get back on track when another NBCT can be hired. For additional information, contact Joyce Killian at jkillian@siu.edu.

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Question 5: How can IHEs use data from their programs to show impact on professional growth and subsequent impact on student learning?

Some SCDEs are paying special attention to overall program design, constructing course experiences and assignments, and designing a program evaluation system that demonstrates the impact of their program on their graduates and ultimately on the students they teach. The following examples from Samford University and Idaho State University illustrate program impact.

Samford University

Information regarding Samford University's new program was systematically collected at the end of year one and year two. Data were collected from teachers participating in the program, from the principals of the schools where they teach, and from supervisory staff in the superintendent's office. There was unanimous agreement that participants significantly improved their teaching practice as a result of the experiences they shared during the two-year program.

A doctoral candidate compared the new Advanced Master's Degree program with the traditional master's degree program in her dissertation, *The Impact of an Advanced Master's Degree Program on Teacher Leadership: A Comprehensive Study*. She found that graduates of the advanced program were more likely to implement the National Board Standards, use video analysis as a classroom technique, use authentic assessment in determining student progress, have students who are excited and enthusiastic about their lessons, assess student progress, and make instructional changes based on results.

Principals of graduates of the Advanced Master's Degree program reflected that those teachers "used innovative practices in the classroom, included cooperating learning groups whose students were enthusiastic about the lessons, and ... utilized various assessment techniques." Principals of graduates of the traditional program "did not identify any consistent evidence of instructional practice." For further information, contact Dean Ruth Ash at rcash@samford.edu.

Idaho State University

Idaho State University (ISU) has engaged in formative study to examine the validity and generalizability of the use of teacher work samples to link teacher performance to student learning, building upon the *Teacher Work Sample Methodology* used by Western Oregon University (Schalock, 1998). Initial research data show support for teacher work samples as valid and credible evidence connecting teaching performance to student learning.

ISU has developed specific criteria for quality teaching performance. Faculty have designed scoring rubrics to measure explicit criteria relative to learning goals, quality of the assessments, and student performance relative to the learning goals. Preliminary data indicate that to be judged competent overall, teachers should be rated on both the quality of their assessments and the quality and quantity of their impact on student learning. ISU has developed specific criteria for quality teaching performance. Scoring rubrics measure explicit criteria relative to learning goals, quality of the assessments, and student performance relative to the learning goals. Preliminary data indicate that to be judged competent overall, teachers must be rated on both the quality of their assessments and

the quality and quantity of their impact on student learning. ISU's finding on the use of teacher work samples provides another way for SCDEs to incorporate impact on student learning into teaching performance assessments that are standards-based. For information on Idaho State University's entire study, consult the research article by Denner, Salzman, and Bancroft (2001).

In addition to research on teacher work samples, ISU has developed an assessment plan to show where and how its students meet its standards-based master's degree. The following are descriptions of the assessments used and how each is linked with degree standards.

Course-Based Assessments: Assessments tied to specific courses to determine the knowledge, skills, and dispositions required for the curriculum project.

Curriculum Project Proposal: A written proposal establishing a rationale for a curriculum plan, learning activities, and an assessment plan.

Curriculum Project: Summative, culminating assessment, including depth of content linked to appropriate pedagogical knowledge, an assessment plan for assessing student performance, and evaluating the effectiveness of the curriculum.

Curriculum Evaluation Report: Summative, culminating assessments to show the methods for evaluating effectiveness of the curriculum, including impact on student learning and reflection on the effectiveness of the curriculum.

Collegial Collaboration Report: Summative, culminating assessment to provide documentation on how feedback from colleagues was used and provided and the effectiveness and value of the collegial collaborations.

For further information, contact the Dean's office at Idaho State University at dennpete@isu.edu or view their website at http //ed.isu/accweb/NCATE/PDFs/Assessment/Assessment%20plan-CurrLead.pdf.

CONCLUSION

...[the degree program] certainly expanded my thinking as a reflective practitioner. I am constantly asking myself questions when I plan to assess instruction. What are the key ideas? How does this [lesson] touch students' lives beyond school?

...Now I look at my students differently. I am less likely to make quick judgments about ability and performance. I am more willing to consider multiple possibilities. The friendships and professional relationships that I have developed in this cohort are very deep.

...I look at my teaching more thoroughly every day. I see the children, the families, and my colleagues differently. I am constantly seeking every possible way to ensure that each child in my classroom experiences success and reaches his or her potential. I have been challenged and stretched by this program, but I know deeply how proud I am to be an effective teacher. I am now ready to seek National Board Certification.

It is fitting to end this monograph about redesigning master's degrees for teachers with voices from teachers themselves, partly so that more faculty will take these voices to heart and partly as a reminder that the nature and content of master's degree experiences for teachers exerts a powerful influence on them. It is also fitting to think about what teachers are saying about their master's degree experiences because the professional development and growth they experience are encapsulated in who they are and who they become as accomplished teachers.

As set forth in the Introduction to this monograph, SCDEs must work together to make teacher education more authentic, relevant, and focused. As professionals in a field dedicated to the education of all students, we need to stand together to improve the quality of teachers for America's schools.

Improving teacher quality has much to do with building their capacity for teaching and learning. Designing an advanced degree around National Board Standards is one way to build such capacity. Capacity is defined as the set of skills, knowledge, tools, data, and commitments needed to do something or to retain the maximum amount of something. Related to education, capacity is defined "by the degree of successful interaction of students and teachers around content" (Elmore, 2002, p. 23). Thus, building the capacity of teachers through professional development requires faculty to scaffold teachers as they increase their capability to make necessary changes in their practice based on new knowledge in order to most effectively impact student learning.

Building capacity of teachers and faculty is our next frontier in providing standards-driven professional development for teachers.

Building capacity of teachers and faculty is our next frontier in providing standards-driven professional development for teachers. As so clearly stated by Richard Elmore (2002), "without substantial investment in capacity building, all that performance-based accountability systems will demonstrate is that some schools are better prepared than others to respond to accountability and performance-based incentives, namely the ones that have the highest capacity to begin with "(p. 23).

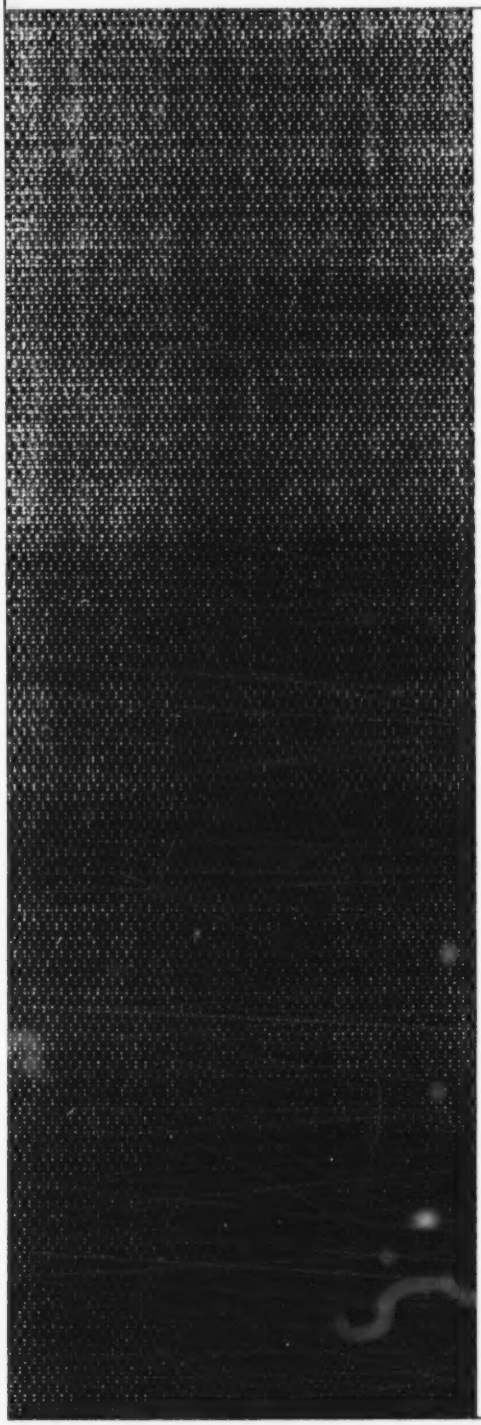
Building teachers' capacity must be job-embedded, for teachers as learners are at the heart of educational reform and teacher quality. They

need to learn a whole new set of skills, knowledge, and practices, which does not "happen by osmosis, administrative mandate, or even sheer will and determination ... but requires opportunities to develop [the] procedural knowledge associated with the innovation, and opportunities to explore new routines and modify practices" (Hargreaves et al., 2001, p. 131-132). This kind of demanding work requires deliberate, sustained learning by teachers.

The role of SCDEs and the NBPTS, in building teachers' capacity offers multiple challenges. Individual SCDEs must survey their teacher clientele and NBCTs to identify their views of what is the best professional development. New forms of coursework that help teachers improve student learning and keep them well positioned must be embedded across programs. Starting with the assumption that teachers are learners, advanced master's programs for teachers modeled after National Board processes offer a logical next step for SCDEs. These programs must help teachers overcome the pressure for narrow delivery of education from scripted lessons to lessons that assess and responsibly analyze student learning.

PART III

Resources



USING NATIONAL BOARD STANDARDS TO REDESIGN MASTER'S DEGREES FOR TEACHERS:

A GUIDE FOR INSTITUTIONS OF HIGHER EDUCATION

National Board for PROFESSIONAL TEACHING STANDARDS™

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The National Board for Professional Teaching Standards' impact on teacher preparation and professional development programs offered by institutions of higher education is widening. Colleges and universities are redesigning master's degree programs using the National Board Standards as benchmarks for what accomplished teachers should know and be able to do. As this monograph goes to press, more than 561 IHEs are incorporating some aspect of National Board Standards and assessments into their degree programs.

NBPTS is committed to providing a number of resources to assist SCDEs in accessing outstanding professional development. For the most up-to-date resources, visit the NBPTS web site at www.nbpts.org.

NBPTS is committed to providing a number of resources to assist SCDEs in accessing outstanding professional development.

National Board Internet Resources

The National Board for Professional Teaching Standards is rooted in the belief that the single most important action this country can take to improve schools and student learning is to strengthen teaching. Specific information about some of these resources follows.

Research and Information
This section provides NBPTS research and information on current research projects, completed research studies, research news about NBPTS, and RFPs. For research and information about the National Board, go to www.nbpts.org/research/index/cfm

Certificate Knowledge Center
The NBPTS Certificate Knowledge Center provides the following information for each certificate: the standards, certificate overviews, portfolio instructions, assessment center information, scoring guides, and the scoring handbook.
www.nbpts.org/candidates/ckc.cfm

Candidate Resource Center
This section is specifically for candidates for National Board Certification. Information and resources provided include portfolio instructions, information about the National Board Scholarship Program, a candidate inquiry service, the online application, the National Board Registration & Information Center (NBRIC), state and local incentives for candidates and NBCTs, the Assessment Center Orientation Booklet, information for retake candidates, and the Certificate Guide.
www.nbpts.org/candidates/index.cfm

Standards and National Board Certification
This section provides information about NBPTS Standards, including ordering and download information, standards development, and public comment periods. There is also information about the corresponding Certificates, the National Board Certification process, Assessment Development, and the National Board Scholarship Program.
www.nbpts.org/standards/index.cfm

NBPTS News Center
The NBPTS News Center is an online newsroom to help you keep up with the latest news about and from the National Board. Also included in this section are links to the following news archive, NBPTS Online News, NBPTS TV, quotes about National Board Certification, and media relations contact information.
www.nbpts.org/news/index.cfm

The Digital Edge
The Digital Edge web site addresses technology's role in the classroom and the role of master teachers as models for both practicing and prospective teachers. This innovative web site features NBCTs in videos of exemplary teaching examples with an emphasis on technology integration.
http://newali.apple.com/ali_sites/deli/index.html

Opening Classroom Doors
The Opening Classroom Doors technology exhibits of teaching practice feature National Board Certified Teachers from the Digital Edge project in minimally edited video from their classrooms. Each video segment and its accompanying text and commentary provide a window into the classrooms of these accomplished teachers.

Other National Board Resources

NBPTS Annual Conference
Offers interactive sessions on professional development as well as opportunities to network with faculty and NBCTs from other IHEs.

National Board Institutes
The National Board Institutes are a series of highly focused seminars designed to prepare you to help teachers in your community who are pursuing National Board Certification. In 2003, the National Board is piloting Institutes offered in combination of online and face-to-face formats. Educational organizations and institutions can contract with the National Board to request National Board Institutes at affordable group rates. It is also possible for the National Board to custom design an institute to meet the specific needs of a group. If an organization would like to host a National Board Institute for a group of 30-35, please contact Stephanie Epp, Manager, Professional Development at 248-351-4444 or visit our web site at www.nbpts.org

Materials and Information for Higher Education
The Higher Education section of the National Board web site offers a free online video and other information, such as lists of institutions using the National Board's Standards in graduate programs. A brochure entitled "National Board Certification: Opportunities for Higher Education" can be obtained by calling 1-800-22TEACH. For information regarding the National Board assessments, visit the Certificate Knowledge Center, the Candidate Resource Center, or the Candidate Support Provider Resource Center. Please contact: Stephanie Epp Manager, Professional Development at 248-351-4444 or sepp@nbpts.org

Standards Documents
Standards for all certificate areas can be downloaded without cost. Go to www.nbpts.org and click on Standards to find the Standards for the age level and content area you are seeking.

Listing of IHEs Utilizing National Board Standards and Assessments
Over the last several years, many institutions of higher education (IHEs) have reported their work in aligning programs and teacher education curriculum with the NBPTS standards for accomplished teaching. Their efforts include redesigning advanced degree programs, creating support programs for candidates seeking National Board Certification, and recruiting National Board Certified Teachers as clinical faculty. The following Institutions by State information has been compiled to assist colleges and universities in networking around NBPTS-related initiatives. No endorsement or sanction of these programs on the part of NBPTS is intended or should be inferred.
www.nbpts.org/highered/highered/cfm

Reports on Teacher Quality and Teacher Professional Development

Center for the Study of Teaching and Policy
http://www.ctpweb.org

NCTAF Educators Resource Center Toolkit
www.teacherscollege.edu/nctaf/resourceeducator/section4.htm

Final report: *Recreating Colleges of Education*, by Richard Wisnieski, describing the ways eight institutions of higher education reinvented their teacher preparation programs using grant money from Bell South.
www.bellsouthfoundation.org//pdfs/recreat01.pdf

To Create a Profession: Supporting Teachers as Professionals.
Report of the Task Force on Professional Development for Teachers to member presidents and chancellors of the American Association of State Colleges and Universities. Addresses issues of professional development and provides professional recommendations.
www.aascu.org/publications

Resources for State Information

National Governor's Association
www.nga.org

Education Commission of the States
www.ecs.org

National Conference of State Legislatures
www.ncsl.org

Federal and State Programs to Improve Low-Performing Schools

Title 1 of the Elementary and Secondary School Education Act
www.ed.gov/offices/OESE/CEP/.

Education Organizations That Address Standards for Higher Education and Professional Development

American Association of Colleges for Teacher Education (AACTE)
http://www.aacte.org

American Association of State Colleges and Universities
www.aascu.org

American Council on Education
www.ace.org

Carnegie Foundation for the Advancement of Teaching
www.carnegiefoundation.org

Holmes-Partnership organization
www.holmespartnership.org

National Board for Professional Teaching Standards
www.nbpts.org

National Center for Research on Teacher Learning
www.ncrtl.msu.edu

National Council for Teaching and America's Future
www.nctaf.org

National Staff Development Council
www.nsdc.org

National Council for Accreditation of Teacher Education (and affiliate specialty professional organizations)
www.ncate.org

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Figure 1

NSDC Standards for Staff Development

Context Standards

Staff development that improves the learning of all students:

- Organizes adults into learning communities whose goals are aligned with those of the school and district (Learning Communities)
- Requires skillful school and district leaders who guide continuous instructional involvement (Leadership)
- Requires resources to support adult learning and collaboration (Resources)

Process Standards

Staff development that improves the learning of all students:

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement (Data-Driven)
- Uses multiple sources of information to guide improvement and demonstrate its impact (Evaluation)
- Prepares educators to apply research to decision making (Research-based)
- Uses learning strategies appropriate to the intended goal
- Applies knowledge about human learning and change
- Provides educators with the knowledge and skills to collaborate (Collaboration)

Content Standards

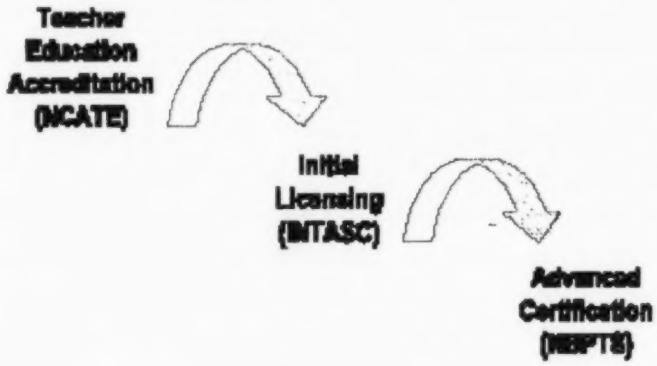
Staff development that improves the learning of all students:

- Prepares educators to understand and appreciate all students, create safe, orderly, and supportive learning environments, and hold high expectations for their academic achievement (Equity)
- Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately (Quality Teaching)
- Provides educators with knowledge and skills to involve families and other stakeholders appropriately (Family Involvement).

Source: Adapted from National Staff Development Council. (2001). Standards for staff development. Oxford, OH: Author

Figure 2

Teacher Quality and the Continuum of Professional Development



Source: Adapted from National Commission on Teaching & America's Future. (1996). What matters most: Teaching for America's future. New York: Author.

Figure 3

Features of High Quality Master's Degree Programs for Teachers

Feature	Key Characteristics
Commitment to Quality	• linked to standards • unity of purpose and what is valued • collaboratively developed with both Arts and Sciences and Education faculty • contain a CORE and area of specialized study
Coherent Requirements	• clearly articulated admissions, advisement, culminating experiences • prominent role of inquiry-oriented research related to classroom practice, collaboration, reflection, and real-world issues
Participatory Culture	• community of learners and learning in professional discourse • involvement of stakeholders in program development
Engaged and Diverse Faculty and Students	• faculty involvement and commitment • critical mass of faculty • diversity among faculty • committed, engaged, and diverse student body
Interactive Teaching and Learning	• active learning • critical dialogue • mentoring (e.g., individualized advisement and direct feedback) • leadership opportunities • out-of-class learning experiences
Sufficient Resources	• institutional support at the department and upper administration levels (e.g., recognition through merit, promotion, tenure)

Source: Adapted from Blackwell, P., & Diez, M. (1998). Toward a new vision of master's education for teachers. Washington, DC: The National Council for the Accreditation of Teacher Education.

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Figure 4

Guidelines for Successful Redesign of Master's Degrees for Teachers

1. Recognize that change is both an individual and an organizational process.

- Make learning relevant to teachers' needs and concerns.
- Recognize that teachers are reluctant to adopt new practices unless they feel certain that they can make them work.
- Consider the context that most directly affects teachers' actions and choices.

2. Think big but start small.

- Approach change in a gradual and incremental fashion.
- Make changes broad enough to challenge professionals and kindle interest.
- Find an optimal mix between professional development that has a vision with realistic ways to achieve that vision.

3. Work in teams to maintain support.

- Involve all stakeholders.
- Provide regular opportunities for stakeholders to share perspectives and seek solutions to common problems.
- Keep the focus on shared purposes and a common vision.

4. Include procedures for feedback on results.

- Note that regular feedback increases the likelihood of sustainability.
- Provide personal feedback on results.
- Focus feedback on outcomes that are meaningful to the professionals involved but also timed to best suit program needs.

5. Provide continued follow-up, support, and pressure.

- Recognize that fitting new practices into one's professional setting is an uneven process.
- Provide continued support and encouragement with subtle pressure to initiate the change process.

Figure 5

University of Minnesota –Duluth Campus
Matrix of Core Courses Aligned with NBPTS Propositions and Related Assessment Experiences

NBPTS Core Propositions	Courses	NBPTS-Related Activities
Teachers are committed to students and their learning.	**EHS 7005 Teaching and Learning in a Systems Context (3 cr.)** *Student Outcomes Related to Proposition #1:* *Frame teaching practices from a systems and community perspective *Apply teaching practices that extend the student and classroom into the community *Define state and federal accountability requirements within current political realities and analyze impact of these systems on students and schools *Tie funding accountability with principles of systemic change *Articulate community relationships in current practice, best practice, and a means to reconcile *Assignments/Products:* *Design and evaluate a teaching project based on principles of service learning, project-based learning, or interdisciplinary principles *Establish relationships with community partners *Define relationships with community wrap-around services, e.g., medical community, social services, higher education systems, and real-world accountability, e.g., business partnerships and community surveys **EHS 7007 Leadership, Change, and Collaboration (2 cr.)** *Student Outcomes Related to Proposition #1:* *Demonstrate knowledge of systems change *Develop leadership and collaboration skills that lead to educational reform *Assignments/Products:* *Propose plan for educational reform in an appropriate setting, on a realistic scale *Conduct and evaluate staff development based on site student achievement goal	1. Document work outside of classroom within larger community. 2. Work with colleagues in the larger profession.
Teachers know the subjects they teach and how to teach those subjects.	**EHS 7008 Foundations of Teaching and Learning: Curriculum Theory and Design (3 cr.)** *Student Outcomes Related to Proposition #2:* *Demonstrate knowledge of current best practices in field *Demonstrate ability to design and implement a curriculum integrating theory and critical thought *Assignments/Products:* *Design a curriculum clearly articulating scope and sequence, and scaffolding toward a set of skills, defined knowledge base, and determined level of understanding **6 additional credits of subject field content**	1. Demonstrate ability to set high and appropriate goals, to connect worthwhile learning experiences to those goals, and to articulate connections between goals and experiences. 2. Direct evidence of teaching best practices in field. 3. Direct theory into practice.
Teachers are responsible for managing and monitoring student learning.	**EHS 7009 Assessment of Learning (2 cr.)** *Student Outcomes Related to Proposition #3:* *Design effective rubrics to measure student learning *Apply results of assessment to improvement plans for teaching strategies *Be knowledgeable about state and federal data *Be able to integrate state, federal, and subject standards into lesson plans *Assignments/Products:* *Develop, apply, and evaluate assessment rubrics *Participate and facilitate a review of student work protocol *Design and implement standards-based curriculum and assessment **EHS 7002 Human Diversity and Exceptionality (3 cr.)** *Student Outcomes Related to Proposition #3:* *Develop intercultural competence *Demonstrate an understanding of privilege and the role of the teacher *Demonstrate an understanding of the importance of diversity and how different perspectives inform practice *Assignments/Products:* *Analyze action research project from a diversity/inclusion perspective *Document inclusive teaching approach with video segment *Analyze parent and community interactions from a diversity/inclusion perspective *Analyze site and classroom data to identify and remediate those in need using culturally competent methodology	1. Analyze student work products, classroom interactions. 2. Demonstrate ability to set high and appropriate goals, to connect worthwhile learning experiences to those goals, and to articulate connections between goals and experiences. 3. Analyze and reflect on evidence. 4. Reflect on practice. 5. Continually assess goals and strategies. 6. Use videotape of practice for analysis. 7. Work with student work samples.

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Figure 5 - continued

University of Minnesota –Duluth Campus
Matrix of Core Courses Aligned with NBPTS Propositions and Related Assessment Experiences

NBPTS Core Propositions	Courses	NBPTS-Related Activities
Teachers think systematically about their practice and learn from experience.	**EHS 7008 Foundations of Teaching and Learning: Curriculum Theory and Design (3 cr.)** *Student Outcomes Related to Proposition #4:* *Understand and think critically about the application of learning theories and curriculum design *Reflect on and analyze own educational practices *Develop a baseline of self-knowledge, with learning goals based on data and feedback *Assignments/Products:* *Written critical analysis of applied learning theories *Written, justified professional goals statement and improvement plan **EHS 7004 Educational Action Research and Inquiry (3 cr.)** Student Outcomes Related to Proposition #4: *Apply educational research and principles of inquiry to teaching practice *Conduct an action research project and write an academic paper for a defined audience based on needs analysis Assignments/Products: *Action research field project (integrated with EDUC 5990) **EHS 7001 Educational Innovations and Technology (1 cr.)** *Student Outcomes Related to Proposition #4:* *Participate in online discussions using descriptive, analytic, and reflective writing *Demonstrate proficiency in use of video equipment for analysis and feedback sessions *Demonstrate knowledge of current best practices in field *Assignments/Products:* *Participation in weekly online reflective writing assignments *Videotaped sessions of teaching practices, inclusive of innovative best practices	1. Analyze own action, student work, etc., and plan and reflect on practice. 2. Continually renew and reconstruct goals and strategies. 3. Critique and synthesize multiple perspectives, best practices, from research and literature. 4. Define a scholarly position and apply it to classroom practice. 5. Use action research as a form of scholarly research and continually assessing practice. 6. Analyze classroom interactions. 7. Analyze actions and plans. 8. Reflect on current practice.
Teachers are members of learning communities.	**EHS 7008 Foundations of Teaching and Learning: Curriculum Theory and Design (3 cr.)** *Student Outcomes Related to Proposition #5:* *Demonstrate skills necessary to create and maintain a professional community *Assignments/Products:* *Define and evaluate your professional community and an on-going system of engagement with that community *Provide evidence of your engagement and analyze qualities of that evidence and of your impact **EHS 7007 Leadership, Change, and Collaboration (2 cr.)** *Student Outcomes Related to Proposition #5:* *Demonstrate collaborative skills in a professional context *Define, plan, and evaluate site-based staff development based on student achievement goals *Assignments/Products:* *State relevant self-development plan based on site goals and appropriate reporting **EHS 7006 Professional Ethics and Professional Competencies (2 cr.)** *Student Outcomes Related to Proposition #4:* *Become familiar with Minnesota's state ethical code for professional teachers *Analyze and synthesize cohort's action research projects as applied to current and future practice *Assignments/Products:* *Develop and explore an ethical issue and make recommendations for the profession	1. Document work outside the classroom with colleagues in the larger profession. 2. Show evidence of accomplishments in the field and comment on impact.

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Figure 6

University of New Mexico Graduate Program – Gallup Site
National Board for Professional Teaching Standards (NBPTS) Course Correlation Matrix

Course/Activity Sequence	UNM M.A. Core Courses	NBPTS Core Propositions	NBPTS-Related Activity
Year I, Summer Session	LEP Institute I Bil. Ed. 593. 1st and 2nd Lang. Develop. Bil. Ed. 482. Teaching English as a 2nd Lang.	#1, #2, #4, #5	• Writing: Importance of L1 and L2 • Philosophy and classroom plan for fostering student self-esteem • Awareness of influence of context and culture • Journal writing
Year I, Fall Semester	CIMTE 500. Advanced Instructional Strategies Bil. Ed. 595 Field Experience in ESL	#1, #3, #4, #5 # 1, #2, #3, #4, #5	• Writing as a way of knowing • Writing of teaching metaphor (philosophy/belief system) • Videotaped strategies analysis • Portfolio development • Classroom practice with coaching from NBCT • Monthly sessions focusing on NBPTS Core Propositions
Year I, Spring Semester	ETSCS 593. Practitioner Research Bil. Ed. 595 Field Experience in ESL	#3, #4, #5 #1, #2, #3, #4, #5	• Field notebook • Case studies • Applied projects in classroom research • Portfolio development • Classroom practice with coaching from NBCT • Monthly sessions focusing on NBPTS Core Propositions
Year II, Summer Session	LEP Institute II (Writing Project) Bil. Ed. 593. First Lang. Literacy Bil. Ed. 593. Second Lang. Literacy	#1, #2, #3, #5	• Writing personal and professional pieces in writing groups • Researching a pertinent classroom issue • Making a formal research presentation • Publishing own writing • Professional reading and discussion groups
Year II, Fall Semester	CIMTE 542. Curriculum Development CIMTE 583. Education Across Cultures in the SW	#1, #2, #3, #4, #5	• Students will demonstrate knowledge of disciplinary content taught in P-12 classrooms. • Students will exhibit effective planning of instruction for P-12 students. • Students will examine, critique, and present diverse theories of curriculum and instruction. • Students will illustrate the ability to reflect on personal and peer theories. • Community-based curriculum will be developed for relevancy. • Students will compile a directory of community experts and other resources.
Year II, Spring Semester	CIMTE 590. Graduate Seminar	#1, #4, #5	• Portfolio development with community emphasis • Portfolio reflection and presentation • Culminating research and writing with accompanying classroom application

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Figure 7

University of New Mexico—Gallup Campus
Videotape of Teaching Episode Analysis

Steps for analyzing your video clip

- Watch your videotape carefully. You may want to watch more than once. We suggest that you initially watch the tape with the sound turned off. This gives you greater awareness of your and your students' nonverbal behavior, such as facial expressions and body language.
- Your analysis need not cover the entire videotape. A 15-20 minute clip is sufficient. Take notes regarding (1) any particular instructional challenges offered by the students in the class, (2) the learning objectives for the lesson, (3) your opinion about the overall success of the lesson (i.e., were the objectives achieved) and the evidence you have for your opinion, and (4) a description of any instructional materials used in the lesson.
- In narrative form, analyze your notes and video. Use the following questions as a guide.

1. What is the extent of classroom involvement (e.g., are the same students doing all the talking?)
2. Are the students engaged in the lesson? How can you tell? What do students' facial expressions and body language tell you about your instruction?
3. What kinds of questions do you ask? Can all questions be answered with a single word? How long do you wait for responses? Do you ask students to explain and/or defend a particular answer or approach? Do you ask students to compare or evaluate alternative interpretations or strategies?
4. Was there opportunity for students to ask questions? How would you categorize the students' questions (e.g., did they indicate confusion and a need for clarification or understanding and extension)?
5. What roles (e.g., expert, facilitator, co-learner) did you play in the videotape? Was each role appropriate for the situation?
6. What kinds of tasks did you ask students to do? Did you capitalize on their previous knowledge and experiences?
7. What instructional opportunities did you take advantage of?
8. What instructional opportunities did you not take advantage of? Why?
9. What evidence did you see of the students taking intellectual risks? Does the class look safe as an environment for getting something wrong? Do students talk to each other as well as to you?
10. Do you push students to take risks, to speculate, to offer conjectures about possible approaches, strategies, and interpretations?
11. Were the learning objectives for the lesson achieved? Did you adjust the lesson so your goals could be achieved by every student? What is the evidence for your answers, both in the video clip and from other sources?
12. Explain how your design and execution of this lesson incorporated different teaching strategies, including a new strategy you are trying out. Discuss the level of success of the new strategy and how you will modify your teaching in the future.
13. Share your findings with the group in a 15-minute presentation that highlights one important thing you learned about your teaching. Briefly explain the strategy used, the classroom context, and your reflection of what you learned. Include a brief (less than 5 min.) clip from the video as evidence.

Source: University of New Mexico—Gallup Campus

Figure 7 - continued

Criteria for Videotape Analysis

Writer's Name _____ Rater's name _____

In each criteria, the writer should perform a self-assessment by placing an X in the appropriate box.

Criteria	Very Competent	Competence	Limited Competence	Resubmit w/ Revisions
Follows logical organizational pattern				
Content is comprehensive, answering all guide questions				
Includes examples, facts, details, anecdotes, etc., as evidence to support statements				
Shows evidence of editing and proofreading final draft so that errors in spelling, punctuation, capitalization, and usage do not impede comprehension.				
Uses research and references where appropriate using APA style				

Comments:

Source: University of New Mexico—Gallup Campus

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Figure 8

ASTL Professional Development Portfolio:
Reflecting knowledge, skills, & dispositions related to the program outcomes

Contents of the Portfolio

The contents of the Portfolio provide evidence of Program Outcomes (NBPTS + GSE Principles) and National and State Standards.

NBPTS + GSE Principles
1. Student learning
2. Content knowledge & effective pedagogy
3. Monitoring student learning
4. Systematic inquiry of practice
5. Learning community
6. Diversity
7. Change agent
8. Technology

I. Professional Documentation

II. ASTL Core (12 credits)

A. Teacher as Knowing & Understanding Learning & Learners:
EDUC 613 & 612. Reflection Point 1.
(Principles 1, 3, & 5)

B. Teacher as Researcher with Cultural Perspective:
EDUC 612 & 606. Reflection Point 2.
(Principles 1, 4, 5, & 6)

C. Teacher as Designer of Curriculum & Assessment:
EDUC 614. Reflection Point 3
(Principles 2 & 3)

D. Teacher as Change Agent:
EDUC 615. Reflection Point 4.
(Principle 7)

E. Reflection Point 5: Integration of Technology
(Principle 8)

F. Synthesis: Connections and Reflections on the Core Courses and their Relationships to the NBPTS & GSE Program Principles

III. ASTL Emphasis Area (18 credits)

Content of this area to be determined by each Emphasis Area's Requirements – This section reflects alignment with National Standards and the SOLs

IV. Portfolio Presentation:

Synthesizing Knowledge and Looking Ahead

George Mason University
Graduate School of Education
ASTL Program Portfolio
Articulation with NBPTS Principles and Content Area Standards

(©Fox &Isenberg/2002)

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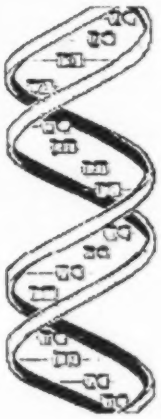
Figure 9

The Architecture of Accomplished Teaching

Set new high and worthwhile goals that are appropriate for ***these*** students at ***this time***.

Evaluate student learning in light of the goals and the instruction.

Set high, worthwhile goals appropriate for ***these students***, at ***this time***, in ***this setting***.



Reflect on student learning, the effectiveness of the instructional design, particular concerns and issues.

Implement instruction designed to attain those goals.

FIRST:

Assessment of students

- Who are they?
- Where are they now?
- What do they need and in what order do they need it?
- Where should I begin?

Source: National Board for Professional Teaching Standards

Figure 10

Documenting Accomplished Teaching
C&I 585T Spring 2000

Instructor:

National Board Certified Teacher (NBCT) in Residence and/or SIU-C Faculty member who has completed training at NBPTS Facilitators' Institutes

Texts:

1. *What Teachers Should Know and Be Able to Do* (National Board for Professional Teaching Standards)
2. Standards for content area (individualized; each will purchase set in his/her area; available from National Board for Professional Teaching Standards)
3. Coursepack prepared by instructor from other National Board for Professional Teaching Standards (NBPTS) resources and recent journal articles

Course description:

This course will help teachers understand and gain requisite skills for participation in the NBPTS process. As part of learning to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work.

Course objectives

1. Teachers will become familiar with organizational tools, reference materials and resources included in a portfolio from the NBPTS.
2. Teachers will demonstrate an understanding of and apply the core NBPTS Propositions and Standards to their classroom practice.
3. Teachers will describe the critical elements of their classroom practice: students, events, concepts, and strategies.
4. Teachers will analyze artifacts and videotaped teaching episodes.
5. Teachers will reflect on classroom analysis and use the knowledge gained to enhance student learning and improve instruction.
6. Teachers will examine ways in which their professional collaboration and communication with families reflect NBPTS Standards.

Course Activities

Course activities will focus on discussion, small group work and individual projects as they relate to the standards developed by the NBPTS and the process of National Board Certification. Teachers will describe, analyze and reflect on . . .

Figure 10 - continued

Activities

Core Proposition and Standards

- Personalize through favorite teacher activity
  - Extend to own practice
    - Discuss specific acts done routinely to illustrate each one
- Articulate how the standards are reflected in daily practice.
  - Use the standard books from your certification area.
    - List 2 specific examples for each.
    - Discuss and respond to the following questions:
    - How did the example demonstrate the standard?
      - What proof could be used to demonstrate proficiency?
        - Why?
      - What would be convincing evidence that the standard was not being met?
        - Explain rationale.

Pick a lesson you taught and write down the standards that were met.
- How did this example demonstrate the standards?
- In what ways can I present evidence from the examples? that illustrate the standard? (Be specific)
- Why did I do what I did? Can I provide logical and pedagogically sound rationale?
- What does this example tell me about my practice and students' learning?

Portfolio Entries

- Overview of the requirements

Connect expectations in entries with the standards
- Use *How will my response be scored?* And connect each bullet with a standard. Why?

Entry Analysis (NEA/AFT Booklet - p. 38)

- Three Kinds of Writing
  - Introductory Activity
    - Quick write and share
  - View State Farm Video

  - Descriptive Writing
    - Contextual information
    - Description of classroom environment and routines

  - Analytical Writing
    - Analysis Practice Activity #1
      - Observation and description
    - Analysis Practice Activity #2
      - Interpretation
    - Analysis Practice Activity #3
      - Analysis to practice

  - Reflective Writing
    - Analysis Practice #4
      - Reflection
    - End of the Day Reflection (Accomplished Teacher)

- Entries with Videotapes

Figure 11

Tips for Videotaping

In two of the portfolio entries for National Board Certification candidates are asked to submit videotapes of their teaching. The purpose of the videotapes is to provide authentic and complete view of teaching as possible.

Practical Matters: The following matters need attention:

Permissions: Obtain permission for all students and adults who may appear on the videotape even for practice.

Equipment: Use the best videotaping equipment and tapes available.

For small groups: carry a hand-held microphone while circulating

Technical Matters: The following technical matters need attention:

Video: The quality of your video is important. Only practice can yield good quality. You might consider these practices: use a tripod; be sure chalkboard writing is legible if it is essential to your video; point the camera at the speaker wherever possible; set the zoom lens to its widest setting if the camera will be moved during taping; increase the amount of light; and avoid shooting into bright light.

Audio: Audio quality can be most troublesome, and it is extremely important. You might consider these practices: keep the microphone close to the action; use an external PZM microphone; eliminate noises that may interfere with taping; have the camera person wear headphones; and be sure to secure all cables.

Whole-class videotaping: The following recommendations are for whole class activities such as demonstrations or discussions. Consider camera placement; set the lens to a wide angle; avoid trying to follow a conversation back and forth between different people; place the microphone with masking tape up high on a wall so it faces toward the majority of speakers.

Small group videotaping: These videotapes are intended to focus on student interaction in collaborative learning and your facilitation of such learning as you move around the room. It is intended to capture a particular kind of classroom structure, one in which you interact with many small groups as they pursue independent work. Consider camera placement to show as many participants as possible; zoom in if the group is looking at or referring to an item; place the microphone closest to the group with whom you are interacting.

Analyzing Videotape of Practice:

1. Watch your videotapes carefully—at least 3 times. Initially, watch with the sound turned off so you can observe for nonverbal behavior.
2. Select several tapes that are continuous and unedited.
3. Answer your analysis questions in clear and straightforward language.

Figure 11 - continued

Videotape Analysis Questions: The following questions will be useful in focusing your attention on aspects of teaching that are evident in National Board Standards.

1. What is the extent of classroom involvement (e.g., are the same students doing all the talking)?
2. Are the students engaged in the lesson? How can you tell? What do students' facial expressions and body language tell you about your instructions?
3. What kinds of questions do you ask? Can all questions be answered with a single word? How long do you wait to form responses? Do you ask students to explain and/or defend a particular answer or approach? Do you ask students to compare or evaluate alternative interpretations or strategies?
4. Were there any opportunities for students to ask question? How would you categorize the students' questions (e.g., did they indicate confusion and a need for clarification or understanding or extension)?
5. What roles (e.g., expert, facilitator, co-learner) did you play in the videotape? Was each role appropriate for the situation?
6. What kinds of tasks did you ask students to do? Did you capitalize on their previous knowledge and experiences?
7. What instructional opportunities did you take advantage of? Why?
8. What instructional opportunities did you not take advantage of? Why?
9. What evidence did you see of the students taking intellectual risks? Does the class look safe as an environment for getting something wrong? Do students talk to each other as well as to you?
10. Do you push students to take risks, to speculate, to offer conjectures about possible approaches, strategies, and interpretations?
11. Were the learning goals for the lesson achieved? Did you adjust the lesson so every student could achieve your goals? What is the evidence for your answers, both in the videotape and from other sources?
12. Explain how your design and execution of this lesson affected the achievement of your instructional goals.

Analysis into Practice:
Based on your observation and analysis of your video, list two specific areas in your practice that the videos made you want to improve or further develop and respond to the following statement:
Identify an end goal and tell how you will reach that goal.

Source: Adapted from: National Board for Professional Teaching Standards (Tips provided across certificate areas)

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